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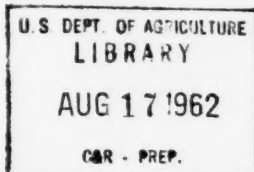
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The Economic Development Section of the ^{CSR/ASF} TECHNICAL DIGEST ^{ONST} SERVICE, formerly prepared for the Agency for International Development through the facilities of the U. S. Department of Commerce, has been discontinued after six bi-monthly issues. It is being replaced by the DEVELOPMENT RESEARCH REVIEW, which will be published quarterly. Like its predecessor, the REVIEW will consist of summaries of and excerpts from selected current published and unpublished materials likely to be of interest to people in underdeveloped countries concerned with economic and social development.

Prepared by the National Planning Association
Frances M. Geiger, REVIEW Editor

for

AGENCY FOR INTERNATIONAL DEVELOPMENT
DEPARTMENT OF STATE
Washington, D. C.

DEVELOPMENT RESEARCH REVIEW

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CONTENTS

One of Britain's leading economists -- A. K. Cairncross -- makes some important contributions toward better understanding of the roles of foreign and indigenous capital in economic development in the opening article. Among the points he discusses is the need for greater exports of manufactured goods by the underdeveloped countries. A new international agreement to help increase the manufactured exports of these countries is explained in the second article, on the International Cotton Textile Arrangements. The main section of this issue is devoted to various aspects of the economics of agriculture in development. Other articles deal with improving statistics for development planning, increasing the efficiency of public enterprises, practical experience in teaching modern skills in peasant villages, the productive employment of unused labor in rural and urban areas, and methods for developing efficient public administration. Brief reviews of some new books on economic and social development are also included.

THE CONTRIBUTION OF FOREIGN AND INDIGENOUS CAPITAL TO ECONOMIC DEVELOPMENT A. K. Cairncross	1
THE INTERNATIONAL COTTON TEXTILE ARRANGEMENTS AND THE MANUFACTURED EXPORTS OF UNDERDEVELOPED COUNTRIES Theodore Geiger	11
GUIDELINES FOR AGRICULTURE'S ROLE IN DEVELOPMENT Sherman E. Johnson	21

THE ECONOMICS OF AGRICULTURE'S CONTRIBUTION TO ECONOMIC GROWTH Simon Kuznets	25
THE RELATIONSHIP BETWEEN AGRICULTURAL AND INDUSTRIAL PRODUCTIVITY H. A. Oluwasanmi	33
INCREASING THE PRODUCTIVITY OF SEMI-COMMERCIAL AND SUBSISTENCE FARMING Sherman E. Johnson and K. L. Bachman	35
AGRICULTURAL CREDIT FOR SMALL FARMERS Horace Belshaw	40
MARKETING PROBLEMS OF SMALL FARMERS M. L. Dantwala	43
FINANCE FOR AGRICULTURAL DEVELOPMENT E. de Vries	46
A PROGRAM FOR LATIN AMERICAN AGRICULTURAL DEVELOPMENT	50
KENYA'S AGRICULTURAL DEVELOPMENT PROGRAM	58
INTERNATIONAL ASSOCIATION OF AGRICULTURAL ECONOMISTS	62
WORLD AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY ABSTRACTS	64
STATISTICS AND DEVELOPMENT POLICY DECISIONS Robert Clower, George Dalton, and A. A. Walters	65
GUIDELINES FOR PUBLIC ENTERPRISES John Kenneth Galbraith	75

A PROGRAM FOR VOCATIONAL TRAINING IN PEASANT AREAS	81
COMMUNICATING INDUSTRIAL IDEAS: AN INTERNATIONAL HANDBOOK FOR INDUSTRIAL EXTENSION Jean Marie Ackermann	91
EMPLOYMENT OBJECTIVES IN ECONOMIC DEVELOPMENT: REPORT OF A MEETING OF EXPERTS	93
IMPROVEMENT OF PUBLIC ADMINISTRATION IN UNDERDEVELOPED COUNTRIES	105
CURRENT TRENDS IN SCIENTIFIC RESEARCH Pierre Auger	111
NEW BOOKS ON ECONOMIC AND SOCIAL DEVELOPMENT	115

THE CONTRIBUTION OF FOREIGN AND INDIGENOUS
CAPITAL TO ECONOMIC DEVELOPMENT

A. K. Cairncross

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Institute of Agrarian Affairs, University of
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Vol. III, No. 2, April 1961, pp. 76-107.]

I

This is a
summary of
the original
article.

Past experience is not very relevant to present day problems of investment in the underdeveloped economies. The important role of British investment abroad fifty years ago, and the ease with which countries then in course of industrializing themselves obtained capital, give the impression that capital transfers were then a larger element in the international economy than now, and made a more significant contribution to world economic development. Certainly the proportion of British saving that between 1875 and 1914 went into investments abroad was very high -- in some years over half -- and to match this proportion United States investment abroad would require execution of the entire Marshall Plan at least thrice a year. But the total flow of capital abroad from the main creditor countries since then does seem to have kept pace with the growth in world trade: both have grown about fivefold. The difference is that before 1914 most overseas investment was in countries which we would regard as comparatively advanced. Even including Latin America, probably not

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more than a quarter of total overseas investment over the decade before 1914 went to the less developed countries.

Nor is it true that over the past two centuries heavy recourse to foreign borrowing has been normal or inevitable in the transition from a pre-industrial society. Most countries (for instance, the United Kingdom, France, Germany, Finland, Denmark and Sweden) have generated internally the great bulk of the savings needed for growth and industrialization. The importance of foreign investment in Europe lay in its impact on sectors of the economy that were critical for further growth -- transport, primarily, but also in industries of a kind which tended to jolt the recipient country's economy onto new paths. Similarly the United States, although it borrowed heavily, imported only a small proportion of its total investment. Japan borrowed very little, and even in Canada, Australia and New Zealand, the role of foreign investment was not great, averaged over the years. It accompanied and reinforced development, rather than preceded it. These countries tended to borrow abroad for railways and other utilities because their own capital was fully occupied in supporting rapidly growing output. They were an unusual group: usually newly settled, either well above the level of subsistence or else very large, inhabited or governed by Europeans, and with rapidly growing economies. As such, they were obviously attractive to investors: foreign investment came almost entirely from private investors or financial institutions, and rarely from governments. It varied in amount according to the private advantages offered, rather than to considerations of national policy. It was generally financed through the capital market -- in big bond issues, by governments or public utilities, of the kind which the market was best adapted to handling -- while the comparatively small firms in agriculture, industry and commerce depended, as now, mainly on domestic capital.

This picture has since changed greatly. Whereas only an eighth of total British foreign investment of about £4 billion in 1914 was direct investment, the direct proportion of total U.S. foreign investment of \$44.8 billion in 1959 amount to \$30 billion. Much more of the capital for public utilities now comes from local capital, from governments, or from international institutions such as the World Bank, while direct investments have been principally in industry, financed by the reinvestment of profits by branches of the international firm. The typical private foreign investor in the last century would hold railway bonds; now he owns shares in a large oil company with assets overseas.

II

The underdeveloped countries of today -- at least in Asia and Africa -- are quite unlike those which attracted most foreign capital

in the last century. Their capital needs in relation to the size of the world economy are much smaller: their populations are very large, but their savings are low and the trade they sustain is small and limited in variety. Few (outside Latin America and the petroleum exporters) have attracted or are attracting much private foreign investment. The newly settled countries of the nineteenth century attracted investment mainly for large-scale development for export of their agricultural resources. The underdeveloped countries today can offer little apart from tropical foodstuffs (for which the market is inelastic) and mineral products (investment in which is apt to be denounced as creating an enclave of no permanent value to the debtor country).

Historically, a major function of foreign capital has been to build up an infrastructure of social capital to permit more rapid development. But in the underdeveloped countries, the structure itself will not always follow: resource development is difficult when a country can offer no striking cost advantages and, being settled, will not lightly change its tenures, practices and attitudes. Yet greater agricultural output has always been a prior condition of industrialization, because it expands the domestic market, allowing specialization to take hold and justifying the mechanization of industry.

Textiles, like agriculture, do not offer much of a springboard to industrialization. Since clothing is the second most important item of consumption, development of a modern textile industry is important in an underdeveloped country. This is a readily mechanized industry, and it may be quite easy to develop (in labor costs at least) a marked cost advantage. Such an advantage formerly provided the basis for very large textile exports from Britain and Japan. But the underdeveloped countries have entered the field late in the day: they can offer only the low-grade textiles of which they formerly were the major importers; and they have to meet strong protectionist barriers.

III

Economic theory has not dealt adequately with international flows of capital. Marxist theoreticians have tried to explain the export of capital as a kind of safety-valve for capitalism when savings outrun domestic investment opportunities. But insufficient attention has been paid to the question from the importing country's point of view -- to the subject of the shortage of capital in the underdeveloped countries.

This shortage can be analyzed in two ways. The first, my own approach, is concerned with the return to be expected from additional investment, the availability and mobilization of domestic savings, and the terms on which funds can be obtained from domestic and foreign sources. The second approach takes it for granted that capital

requirements will rise with an acceleration of growth, and that as savings will not change much in relation to income, foreign capital may have to fill the gap. If this approach be adopted, it is not clear why many countries have industrialized themselves without much foreign borrowing. The evidence is that rapid growth affects savings as well as capital needs, and that mechanisms (such as the responsiveness of house-building to changes in interest rates) help to bring them into balance.

This second approach disposes underdeveloped countries to treat foreign investment as a residual in their plans. It is expected to make up the balance of capital needed, in addition to domestic savings, to reach a planned rate of capital formation (and thus, in turn, of growth). It is taken, too, as making up the prospective deficit in the balance of payments over the period planned. This approach can be applied to calculations about the needs of the underdeveloped world as a whole. It lies, for instance, behind the calculation (in 1951) of a group of United Nations experts that these countries needed annual grants or loans of \$10-\$14 billion, and behind the more recent and modest estimates of Paul Hoffman (\$7 billion annually) and the General Agreement on Tariffs and Trade.

Estimates of this kind are necessarily tentative. Current rates of economic growth in the underdeveloped countries may actually be higher than in the advanced countries; rates of saving are not known with any certainty (the 7% generally taken as average may be much lower than the proportion saved out of any increment in income); even the current inflow of capital is not known with any precision (by 1959 it was probably running at over \$5 billion a year). But one implication of these figures is clear. The capital inflow bears a much higher relation to the domestic savings of the underdeveloped countries than was customary in the development of the newly-settled countries fifty years ago. Hoffman's estimate suggests that about a third of net domestic capital formation is financed from abroad. The \$7 billion inflow for which he calls would increase the proportion to 45%, while the UN proposals of 1951 would bring the figure to almost 75%. Another implication is that unless foreign capital were supplied by way of grant, debt service would increase rapidly. Figures compiled by the World Bank for 21 low-income countries show that in the late nineteen fifties their external public debt was rising by \$1 billion annually, and that debt service payments, rising rapidly, already absorbed 7.5% of their external earnings. If supplied on commercial terms, the inflow of a further \$3 billion a year would represent an impossible burden for countries whose entire income does not currently exceed about \$125 billion.

Public aid to the underdeveloped countries has grown steadily by about 15% per annum throughout the fifties, reaching about \$3½ billion in 1960, and actually providing the most dependable item in the balance of payments of these countries. We have now to think not about the

respective contribution of private foreign investment and domestic investment to development in these countries but how best to use foreign aid in conjunction with commercial investment.

If an extra \$3 billion a year would allow the underdeveloped countries to "take off," its provision would not be too difficult for the advanced countries. But development cannot be bought so cheaply. The provision of capital will not be effective by itself unless large investment opportunities are going unfilled. In the Western world, the great dynamic forces have been technical progress and a widening of markets: a shortage of capital, like other obstacles to growth (lack of skill, entrepreneurial talent and administrative experience, and even, eventually, social attitudes and institutions) has gradually yielded to the pressure of opportunity. This is not to belittle the importance of capital accumulation, or the scope for intervention by public authorities. In all development there is an interplay between individual effort and the social and economic framework within which that effort is exerted: in the less-advanced countries the framework -- including such expensive items as a communications network and education -- is of commanding importance, and demands heavy government investment which, for a time at least, will require foreign loans or grants. If the operation is successful, domestic savings should at some stage begin to overtake capital needs. But even so, if the pace of development is set by the availability of finance, the transfer of capital may have to continue for a long time. I believe, however, that it is not just finance, but the whole effort of modernization -- in the shape of new forms of social organization, new habits and attitudes, personal experience, knowledge and skills -- that is a precondition of continuing development.

IV

Quite apart from any political considerations, unnecessary foreign borrowing is to be avoided, particularly by the typical underdeveloped country which, heavily dependent on exports of a single commodity, and with an inelastic demand for most of its imports, cannot freely assume external liabilities. Any foreign borrowing it undertakes should be justifiable under one or more of three headings:

(a) It may "top up" domestic savings -- that is, permit a higher rate of investment than domestic savings alone would support. This is its main, and most popular, justification.

(b) Savings may not easily be mobilized to finance badly-needed projects -- for instance in the private sector if the capital market (like the country) is underdeveloped. In general, however, it is preferable to improve domestic financial arrangements, if these are the

only obstacle, rather than to use foreign capital because it is more easily raised.

(c) Foreign capital may bring with it other scarce productive factors, such as technical "know-how," business experience and so on, that can contribute to development.

As the case for foreign borrowing is admitted to be strongest in relation to public utility investment, I shall confine myself to the question of investment in primary activities -- first, mines and plantations, and then manufacturing and indigenous agriculture.

To the foreigner, investment in enterprises which earn foreign exchange directly is relatively attractive, since the danger of difficulties in transferring profits is small. Such investments are less attractive to the host countries, since they do not appear to form an integral part of the economy, may disrupt the social structure of the country, and often cause trouble by importing alien immigrants who are never entirely assimilated, and who deprive the local inhabitants of the gains of a higher level of economic activity. But this must usually be accepted. Even if the capital were available, the country often cannot provide the necessary expertise to manage enterprises of the type run by foreigners. In some countries, the stimulus to economic effort provided by plantations may in time become unnecessary; in others, these foreign enterprises have developed the crops and mineral resources which provide the staple exports, their activities furnishing the economy both with foreign exchange, usually scarcer than capital, and with tax revenue, which can be applied to capital purposes.

All development, it is arguable, is likely to take the form of an enclave -- though not necessarily a foreign enclave -- within an existing social and economic structure. The fact that the enclave is managed by foreigners and employs alien immigrants who are bound to excite antagonisms by their very success intensifies the stress and strain of development and adds to its ultimate social cost. But some stress and strain is inevitable and the better adjusted a society is to primitive conditions the greater is likely to be the disintegration required in order to transform it. The more contact there is with foreigners the more rapidly the process of transformation can take hold; and however weak the links between an enclave and the rest of the economy it can hardly avoid exercising a powerful influence, by demonstration if in no other way, on the thinking of the population.

There is usually less bias against foreign investment in manufacturing. There are several reasons for this. A high level of manufacturing is the mark of an advanced country. Experience in manufacturing can be put to use over a whole range of industries, and provides increasing opportunities as the range of technical knowledge increases.

Compared with agriculture or mining, manufacturing is more likely to yield external economies (encouraging related industries, improving communications, increasing skills, and so on), and to be compatible either with the starting of similar domestic enterprises or the later buying out of the foreign company. These reasons may not be well founded. A foreign-controlled textile mill may be no less of an enclave than a tin mine; a successful export trade in cotton or tea may have repercussions as wide as the building of a steel mill. Foreign capital usually earns a relatively high return, and can absorb much foreign exchange if used to supply goods to the domestic market.

However, it is not a domestic shortage of capital (which can be relieved at less than half the cost by borrowing from e.g. the World Bank for public utilities) but the management and technical knowledge that comes with foreign capital that mainly justifies it. Thus the less-advanced countries need above all to find and train men to run industrial undertakings -- from entrepreneurs right down to workmen. They need to develop, throughout their industrial system, a power to innovate, a built-in incentive to make improvements, a linking of personal advantage with those improvements, and a readiness to look for opportunities of making them.

Without this intangible capital, growth cannot become self-sustaining. Its acquisition will take time, for it depends on experience as well as education. Foreign investment can help, if the community that uses the physical assets involved makes the simultaneous adjustment that industrialism requires. But the scope for such investment is limited in a poor country: export opportunities are not usually good, and low incomes limit domestic markets, and in turn, raise costs. This underlines the importance of raising income levels in these countries, and ensuring that agriculture, by far the largest sector in their economies, does not act as a brake on development. Experience suggests that the forces of growth rarely originate in the agricultural sector; more commonly, it needs some external stimulus to adapt itself to the growth of other sectors. Investment can contribute to agricultural development in part by providing this stimulus, and in part by the expenditure of capital within agriculture itself.

Historically, the most powerful external stimulus has been an increase in demand, the market expansion often being associated with an improvement in transport. Thus an obvious use for capital is to improve communications between rural areas and urban outlets at home and abroad. This will help farmers to specialize and produce more; it will open up rural markets for consumer goods (providing an incentive to increased production); it will help to drain off the natural increase of the countryside to other work, and will generally bring in those modern ideas from which flow innovations in crops and production methods. Investment in transport is an easy and cheap way of absorbing foreign capital, which can be provided under international auspices. A good

deal has been done in this field, but much more investment is badly needed.

The opening up of new markets has, however, often led to greater output and the introduction of new crops without much change occurring in the institutions and techniques of agriculture. Population growth absorbs much of the increased production; the market for manufactures remains restricted. The development of an export trade through better transport may achieve the fundamental step of creating a monetary economy. But it may involve little change in systems of tenure or in methods of production, and no continuous improvement in economic levels.

How can investment help in this? Here we run up against the thorny question of land tenure. It would be unreal to discuss the possible contribution of capital investment to agricultural change without stressing the institutional barriers -- the widespread system of sharecropping, the lack, often, of clear and exclusive rights to land -- that frustrate such investment. On the other hand, we know from experience in Japan (where over the past century yields have been tripled at little cost by better techniques) that productivity is far lower than it need be. Capital alone will not raise productivity; the difficulty in promoting growth in agriculture, as compared with industry, is that one cannot start from scratch; current uses of land must be changed, existing cultivators must be influenced to make the changes. Capital must be linked with policies that go far beyond finance.

These policies must include changes in taxation and tenure to give the cultivator more security and incentive -- consolidation of holdings, fixed rents and the extinction of communal rights. The changes will be quicker and smoother if capital is available. A common program ought to include, as mutually supporting elements, agricultural extension services, better warehousing, and marketing and credit facilities.

At present nearly all capital made available to agriculture comes from private sources: institutional sources are insignificant. This is true both in developed and underdeveloped countries. What distinguishes the situation of cultivators in the latter is the high rates of interest they pay for credit, the restrictive conditions that lenders impose on their freedom to buy and sell, and the difficulty of obtaining capital on long or medium term. The cultivator's lack of assets, and his tendency to borrow for consumption, also weaken his position.

The essential problem is to strengthen institutional lenders to agriculture and to enable them to compete more effectively with private lenders. Sometimes these lenders can mobilize savings by cooperative effort. But in the poorer countries state help is usually necessary, either by way of guarantee, by direct participation in the capital of credit institutions, or by outright lending. Central government

support is made more necessary when -- as in India -- most agricultural debt is owed to urban lenders (so that agricultural savings are generally not reinvested in the countryside, and hence can effect no great net reduction in the rural debt). Government action is forced also because fluctuations in markets mean that cooperatives can lend only against good security, and because credit facilities are often best offered in one package in conjunction with technical assistance.

Whatever the means used, more capital must be fed into agriculture, at lower rates of interest and at longer term, and must be used in ways that will encourage productivity and thrift. As thrift grows, so will savings, and the need for outside funds will diminish. But where is the government to get the money in the first place? And how can foreign capital help?

There is probably no surplus of capital available for transfer from the urban areas. Indeed experience suggests that agricultural savings are needed to finance industrialization. If the state cannot raise sufficient funds at home for agriculture it may try to raise them abroad. It must however decide this not in the light of how easily it can borrow, but by reference to competing claims and to its willingness to accumulate liabilities in foreign currency. Some private foreign capital, in the shape of trade credit from importers and others, may also be used highly productively, but there is not much chance of raising such private capital by other means. Agriculture is, however, sharing in various ways in the inflow of aid from governments and international agencies.

The most straightforward of these ways is the direct loan to finance permanent improvements -- for instance irrigation and reclamation schemes, and multipurpose projects, of which land reclamation and improvement form part. A second possibility is to feed in agricultural credit through the central bank or through some financial intermediary enjoying government support. The World Bank has done this in Costa Rica and elsewhere. A third method is direct participation in the capital of development banks and other financial institutions designed to provide farmers with credit. Counterpart funds derived from U.S. grants have been used in the Philippines to finance agricultural cooperatives and farm credits. Yet another is the provision of agricultural surpluses against local currency: financing the movement of the surplus to the overpopulated underdeveloped countries, it affects their agriculture by reducing pressure on land, cutting out a highly seasonal element in farm labor, and at the same time increasing the supply both of food and of foreign exchange.

The main burden of finance, however, must continue to rest on domestic savings. Foreign capital may be able to speed things up and develop a momentum that allows growth to become self-sustaining. If

the object is so to endow the less-advanced countries that they can actually overtake the more-developed, it seems inevitable that the transfer of capital be large, continuing, and on non-commercial terms. For such unprecedentedly high rates of income growth must almost certainly require also unprecedentedly high investment -- and there is nothing to suggest that these desperately poor countries can achieve savings ratios actually above the level of their more fortunate neighbors.

THE INTERNATIONAL COTTON TEXTILE ARRANGEMENTS AND
THE MANUFACTURED EXPORTS OF UNDERDEVELOPED COUNTRIES

Theodore Geiger

[This article is based on a lecture given before a group of economists from underdeveloped countries.]

In 1789, Samuel Slater left England for the young republic of the United States and, within a year, had established the American cotton textile industry in the new state of Rhode Island. Slater's departure for the New World was not a routine emigration, nor was his industrial achievement an ordinary one. Under then-prevailing mercantilist doctrine, the British Government had prohibited the exportation of textile machinery, or plans or models of such machinery, and had banned the emigration of skilled mechanics to maintain its supremacy and virtual monopoly in the manufacture of cotton goods. Slater committed to memory the plans of the Arkwright spinning frame while working in a British cotton mill and slipped out of the country disguised as a farmer. He was the first to break Britain's monopoly.

Over the ensuing century, others followed his example, and Britain's textile supremacy gradually dwindled. Its important textile market in America was soon limited by the enactment of the Tariff Act of 1816 to protect the United States' first infant industry. In the course of the century, other countries also imposed tariffs to protect their own newly-established industries.

Cotton Textiles in Underdeveloped Countries

Samuel Slater's need to memorize the plans for textile machinery has not had to be repeated by others. The

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industrialized countries no longer ban the export of cotton textile equipment, and skilled textile workers are not prohibited from emigrating. Indeed, some countries, such as the United States, have used their resources to assist the establishment of cotton textile industries abroad.

But, the circumstances leading to Slater's venture and the results of his initiative have been repeated countless times since the end of the 18th century. Cotton textile industries have been established in countries starting on the road of economic development. Cotton textiles are usually the first -- or one of the first -- manufactured articles to be produced in developing countries.

The reasons why cotton textile factories are the earliest to be established are neither unusual nor hard to discover. The demand for textiles ranks almost as high as that for food in low-income countries. Many of them are also, or can easily become, growers of cotton. Whether or not they grow the raw material, they usually suffer from foreign exchange shortages, which greatly hamper their ability to import even such essentials as food and textiles. Though the capital required to build and equip a cotton mill is large for a low-income country, it is insignificant compared to the capital requirements for, say, a steel mill. Unskilled labor can be trained for work in a textile factory without too much difficulty. Indeed, the structure of the cotton textile industry is that of a labor-intensive industry even to this day in the automation-oriented United States.

Development of Export Trade

However, the establishment of textile industries in underdeveloped countries does not immediately or inevitably lead to an export trade in cotton textiles. Nevertheless, even before domestic output can fully meet domestic needs -- although, clearly, income growth and not the existence of cotton mills per se results in cotton textile consumption -- circumstances may be conducive to the development of cotton textile exports. An adequate supply of raw cotton and of low-cost labor are basic conditions. Importers in the high-income industrialized countries often seek sources of low-cost imports, and may take the initiative in stimulating exports of such products from low-income countries. In addition, the governments of underdeveloped countries are well aware that traditional exports of foodstuffs and raw materials do not yield as much foreign exchange as manufactures -- with their large value-added increment -- particularly in recent years, when there has been a steady decline in the terms of trade for primary products.

It should not be assumed, however, that infant cotton textile industries in underdeveloped countries find immediate success in the markets of the developed countries for a wide range of cotton products.

The initial export item is normally cotton yarn, the first stage in cotton textile production. It is only after some time and considerable experience that a country can develop a satisfactory export trade in cloth and, even then, it will initially be limited normally to unbleached, grey cloth. Only as more experience is gained are finishing facilities installed and cloth printed and dyed for export.⁶

Furthermore, production costs are initially high in underdeveloped countries. Wages may be low in relation to pay scales in the developed countries, but productivity is also low and labor absenteeism and turnover are high. Tariffs and/or quantitative restrictions are adopted to protect these infant industries. In the United States, for example, the Tariff Act of 1816 was needed to protect America's newly-born cotton textile industry, and similar measures have been adopted by other developing countries since then. Hence, in an underdeveloped country, costs to the consumer of the finished product may be higher than if no industry had been established.

Nor, is a major market in the industrialized countries captured initially by the infant cotton textile industry of an underdeveloped country. In the early years of manufacturing, the often inferior quality of its output restricts export sales largely to other low-income countries, particularly those which have not yet -- and may never -- develop their own cotton textile industries. Indeed, the UN Economic Commission for Europe reported in its 1960 Economic Survey that "intra-trade (in general) among the less-developed countries already accounts for about one-half of their (admittedly small) total exports of manufactures."

Undoubtedly, part of the reason for this trade among the low-income countries is the existence of quantitative restrictions in the developed countries. Cotton textiles are probably subject to more intensive restrictions of this type than any other product. Of the 14 developed countries participating in the Geneva Short-Term Cotton Textile Arrangement of 1961, 11 have quantitative restrictions of some sort on imports of some cotton textiles from some underdeveloped countries. Prior to the Short-Term Cotton Textile Arrangement, the member states of the European Economic Community (EEC) permitted only 3,800 metric tons in the aggregate of various types of cotton textiles to be imported under quota from Japan, Hong Kong, India, and Pakistan, although additional quantities of certain other cotton textiles were imported ex-quota by several member states from these low-cost exporting countries. Even when the quota level was increased by 60 percent to some 6,000 tons, effective January 1, 1962, as a result of the Geneva Arrangement, it is still small compared to world trade in cotton cloth alone, which was over 700,000 tons in 1960.

Trends in Cotton Textile Trade

As cotton textile industries have been established in many countries, the dependence of world consumption on imports has declined steadily. Indeed, a basic concomitant of the development of cotton textile industries has been import substitution. In 1913, world commerce in cotton textiles stood at an all-time peak. International trade in all types of textiles (of which cotton textiles accounted for the bulk) represented some 25 percent of total world textile consumption. Thereafter, the decline in international cotton textile trade was steady, even though gradual. Despite the introduction of synthetic fibers, world textile trade accounted for a declining proportion of world consumption until a plateau of around 10 percent was reached during the decade following World War II.

In the last few years, however, certain low-cost cotton textile producing countries -- primarily Japan, Hong Kong, India, Pakistan, Spain, Portugal, Korea, Taiwan, and Egypt -- have been able to move into those international markets which were not barred to them by import quotas. With the advantage provided by their membership in the Commonwealth, Hong Kong, India, and Pakistan found a growing outlet for their cotton textiles in the United Kingdom. Japan and Hong Kong also became the major foreign suppliers of cotton textiles to the U.S. market, developing a new aspect of the international cotton textile trade -- apparel and other made-up goods -- imports of which into the United States had been relatively unimportant, except for luxury items, until only a few years ago.

The year 1960 saw a resurgence in world cotton textile trade to levels unparalleled since those of the 1920's. World trade in cotton cloth reached 750,000 metric tons, the highest since 1929, while trade in cotton yarn of 232,000 tons was almost a third above the previous peak reached in 1937. Data on 1960 exports show that the great rise in world trade which occurred in that year was largely accounted for by the low-cost producing countries.

Impact on Developed Countries

The resurgence of world cotton textile trade in 1960 was obviously not without its effect on those developed countries which did not bar imports through quotas. The impact was sharp and clear, and its repercussions were far-reaching:

Imports into developed countries increased substantially. In the case of the United States, 1960 imports increased by about 50 percent over the previous year. Whereas in 1954 cotton textile imports into the United States had amounted to only \$76 million, by 1960 they had risen to \$254 million. For the first time in the postwar period, the

United States was a net importer of cotton textiles on a quantitative basis, although it was still a net exporter of these products on a value basis. The increase in cotton textile imports into the United Kingdom was almost as dramatic. Between 1958 and 1960, such imports almost doubled, and the United Kingdom enjoyed the distinction of being the world's largest import market for cotton textiles.

Imports rose much faster than domestic production. The result was a substantial rise in the percentage of imports of cotton textiles to domestic consumption in the developed countries. In 1960, the ratio climbed to over 40 percent in the case of Canada and to just under 40 percent in the case of the United Kingdom.

In the United States, imports in relation to consumption reached an all-time high of 6 percent; the ratio had been only 3 percent the year before. Although small compared to the ratios in Canada and the United Kingdom, the U.S. situation was more serious than the magnitude implied. In certain products, the U.S. cotton textile industry is virtually impregnable to import competition. These are items produced in large volume (generally in factories making one item only) with a minimum of labor input and maximum economies of scale -- for example, 80x80 print cloth and corduroy. In many other items, however, the U.S. industry is highly vulnerable -- for example, velveteens or gingham, where labor input is intensive. In the latter items, the ratio of imports to consumption in the United States may be as large as the general average in the United Kingdom. Indeed, it is only because of such products as print cloths and corduroys that the U.S. average is as low as 6 percent.

Exports from the developed countries declined. The prime example of this development is the United Kingdom. In 1937/38 the United Kingdom exported 141 million pounds of cotton yarn and thread and 1.65 billion square yards of cotton cloth; in 1960, it exported only 21 million pounds of yarn and thread and 327 million yards of cloth. For the United States, its 1960 exports of cotton cloth were only about 30 percent of its 1947 peak, although the United States was still well ahead of its export level of the late 1930's (439 million square yards in 1960 as compared with 267 million yards in 1937/38).

The U.S. Initiative

The resurgence of cotton textile trade in 1960 aroused concern on the part of those developed countries which did not employ quantitative restrictions against imports. In the United States there was both concern and a dilemma.

The U.S. concern stemmed from what was considered a basic inequity in the world trade pattern. First, Japan was not sharing in this

expansion of exports from the low-cost countries. In 1957, Japan began to curb its cotton textile exports to the United States on a voluntary basis. All such exports were subject to rigid ceilings. The result was a decline in U.S. cotton textile imports from Japan from \$84 million in 1956 to an annual level no higher than \$77 million in 1959. While Japan was curbing its exports, other less-developed countries were expanding their exports to the United States. Cotton goods imports from Hong Kong rose from \$700,000 in 1956 to \$64 million in 1960. A similar situation, although at a lower level, existed with regard to U.S. imports from India, Portugal, Spain, Egypt, Taiwan, and Pakistan.

Second, while the United States was expanding its imports from the low-income countries, the West European countries, particularly the member states of the European Economic Community, were not. Although the ratio of imports to total consumption in the United States and in the EEC stood at about the same level in 1960 -- about 6 percent -- in the case of the former three-fourths of such imports came from the six major low-cost exporting countries -- Japan, Hong Kong, India, Pakistan, Spain, and Portugal. In the case of the EEC, less than one-third came from these areas. The situation in France and Italy attracted particular attention: their ratios of imports from the low-cost countries to domestic consumption were insignificant fractions of one percent.

But, any effort to curb such imports presented a major dilemma to the United States. The U.S. Government recognized clearly that the less-developed countries had to expand their exports of manufactured goods if they were to make much progress towards economic development. The United States was committed to assisting these countries in attaining more highly developed economies, and had spent substantial sums on foreign aid for this purpose. The importance of cotton textile exports in this development effort was also clearly recognized. But, rising imports were disrupting the U.S. textile industry; unemployment was increasing in an industry which employed directly over 2 million people -- the second largest employer of labor in manufacturing in the United States.

Therefore, the new Kennedy Administration decided in the early months after taking office to try to achieve a multilateral solution to the world trade problem. In a comprehensive program covering textiles, President Kennedy directed the Department of State "to arrange for calling an early conference of the principal textile exporting and importing countries. This conference will seek an international understanding which will provide a basis for trade that will avoid undue disruption of established industries." The President pointed out that his program recognized "the national interest in expansion of world trade and the successful development of less-developed nations."

The Short-Term Arrangement

The result of this U.S. initiative was the calling of an international conference in Geneva in mid-July 1961 under the auspices of the General Agreement on Tariffs and Trade (GATT). The conference formulated a one-year arrangement, effective October 1, 1961, to regulate international trade in cotton textiles while providing growing export opportunities for the low-cost producing countries in a reasonable and orderly manner. This Short-Term Arrangement was designed to increase access to markets where imports are at present subject to restriction; to maintain orderly access to markets where restrictions are not at present maintained; and to secure from exporting countries, where necessary, a measure of restraint in their export activities so as to avoid disruptive effects in import markets.

Under the Arrangement, an importing country not maintaining restrictions on imports may request an exporting country to restrain its exports if they are causing, or threatening to cause, disruption to the market of the importing country. The minimum level of restraint is the volume of trade in the category concerned (64 categories are enumerated in the Arrangement) during the twelve-month period ending June 30, 1961. If, after 30 days, the exporting country does not accede to the request, the importing country may refuse to accept imports at a level higher than the restraint level.

Importing countries with quantitative restrictions (primarily the EEC) pledged themselves to increase access to their markets substantially. As of January 1, 1962, EEC quotas on cotton textile imports from the six major low-cost exporting countries were increased by about 60 percent in consequence of this provision in the Arrangement.

Nineteen governments acceded to the Short-Term Arrangement. The United Kingdom, one of the nineteen, acceded on behalf of its colony, Hong Kong, as well. The participating countries account for more than 90 percent of world trade in cotton textiles outside the Communist bloc.

The Long-Term Arrangement

The Short-Term Arrangement was admittedly only a stop-gap measure until the governments concerned had the opportunity to negotiate a more detailed arrangement of longer duration than one year. After a series of meetings in Geneva under GATT auspices, the nineteen governments concluded negotiations in February 1962 for a five-year arrangement, which will become effective October 1, 1962, upon the expiration of the Short-Term Arrangement. The Long-Term Arrangement has now been submitted to member governments for their ratification.

The Long-Term Arrangement recognizes the need for cooperative and constructive action in fostering world trade and for facilitating the development of less-developed countries. It notes that some cotton textile markets have been disrupted by imports. It establishes the objective of dealing with problems of market disruption in such a way as to provide growing export opportunities for the low-cost producing countries.

The Long-Term Arrangement follows the general approach of the Short-Term Arrangement. When imports into an unrestricted market are causing or threatening to cause disruption of that market, the importing country may request the exporting country to restrain its exports. Failing agreement on export restraints, the importing country can impose import restrictions. The minimum restraint provided in the Arrangement during the first twelve months of restraint is the level of imports of a particular product during the first twelve months of the 15 months preceding the month in which the request is made. In the second twelve months of restraint, should market disruption persist, the level would be increased by 5 percent, except that, in exceptional circumstances, the importing country may establish a smaller percentage of increase. Should market disruption persist into third, and further, twelve-month periods, the level in each case would be that of the preceding twelve months increased by 5 percent.

In the case of imports into restricted markets, the importing countries maintaining such restrictions commit themselves in the Arrangement to relax these restrictions progressively each year, with a view to their elimination as soon as possible. It is understood that the EEC countries will be increasing the amounts which may be imported by them under quota by around 100 percent during the five-year duration of the Long-Term Arrangement.

The Future of Manufactured Exports from Underdeveloped Countries

In the negotiation of the Long-Term Arrangement, the exporting countries expressed concern that it should not inhibit adjustments in the older developed countries by which their textile industries might gradually make way for the lower-cost cotton textiles of the underdeveloped countries. This concern arises from the uncertain long-term outlook for the exports of the underdeveloped countries.

In its 1960 Economic Survey, the UN Economic Commission for Europe projected the import and export requirements of the less-developed countries to 1980. These projections implied that exports of manufactures by these countries would have to increase from the \$2 billion annual level of recent years to around \$15 billion two decades hence. The ECE pointed out:

"The postulated increase in the share of manufactures in total exports of the developing countries -- from less than 10 per cent now to 30-35 per cent in 20 years' time -- indicates the magnitude of the task with which both the developing countries themselves and all developed countries are faced. Equally rapid shifts in export structure have been achieved by individual countries in the process of industrialization, but there is no precedent for a wholesale shift of such magnitude. Merely in terms of the industrialization programmes of the developing countries, it implies an effort to expand manufacturing capacity enough to provide in addition to industrial production for the domestic market, an eight- to tenfold increase in exports of manufactures. For the developed countries, it implies a need to adapt the pattern of foreign trade, and to some extent the domestic industrial structure, to a gradual change of international specialization."

In the light of the importance of cotton textiles in the export patterns of the less-developed countries, it is necessary to ascertain whether the new international cotton textile arrangements would be conducive to attainment of this objective as calculated by the ECE. The answer lies in the basic concept of these arrangements -- namely, growth in exports, but on an orderly basis.

Both the Short-Term and the Long-Term Arrangements have helped the less-developed countries increase their access to the growing markets of Western Europe in a bold and dramatic way. Although the bars to low-cost exports have not been abolished by these Arrangements, they have been lifted so substantially that total cotton textile imports into the EEC from the less-developed countries should represent about the same percentage of per capita consumption in the Community as in the United States by the end of the five-year arrangement. With regard to exports to those countries not employing import restrictions, the Long-Term Arrangement assures a 5 percent annual growth factor after the second twelve months of restraint. Unless there are unusual circumstances, this growth factor would apply even during the second twelve months of restraint.

Perhaps of greater importance is the fact that these international arrangements for cotton textiles have focused the attention of the developed countries on the need to provide other growing export opportunities for the underdeveloped countries. The latter now have both a framework and a forum in which they can claim their right to these opportunities.

AGRICULTURE

GUIDELINES FOR AGRICULTURE'S ROLE IN DEVELOPMENT

Sherman E. Johnson

[Dr. Sherman E. Johnson, Economic Research Service, United States Department of Agriculture, and President of the Eleventh International Conference of Agricultural Economists, presented a paper to the Eleventh International Conference held at Cuernavaca, Mexico, in August 1961 on "Economic Development and the Welfare of Farm People." These guidelines -- slightly abbreviated -- form a portion of that paper. In essence, they outline both a basic philosophy and a broad program for agriculture's role in development.]

These are
excerpts
from the
paper.

In what follows, I state my personal beliefs concerning approaches to economic development, from the standpoint of the potential role of agriculture and with regard for the welfare of farm people. I shall not attempt to document these statements. Some of them have been well verified by others. Some, however, constitute only beginning hypotheses or my own beliefs concerning approaches to development.

1. Adequate supplies of food and other farm products are essential to rapid economic development in any country. I know of no country that has made rapid progress while faced with serious food shortages. Plentiful food supplies are essential for high worker productivity and low-cost industrial production. Food can be obtained in three ways: (a) domestic production, (b) commercial imports (paid for with exports of other products or services), or (c) foreign aid (either direct supplies or foreign exchange to buy food).

Commercial imports are usually limited by the scarcity of foreign exchange, and special aid programs are only supplements to domestic production and commercial imports. In most of the less developed countries, therefore, increased food demands will need to be met largely by expanding domestic food production.

2. Early expansion of food production is necessary to meet the increased demands for food that will be generated by the higher worker incomes resulting from the construction phase of industrial and service development. A high percentage of the increase in incomes of workers will be spent for food. Therefore, inflationary tendencies will be restrained if food production is expanded to supply these growing demands.

3. Human labor is not a commodity, even though it is a valuable resource in expanding food production, and in other economic activity to provide better living for all citizens. All workers are human beings and entitled to share in economic progress. They are not machines, to be ruthlessly exploited for the benefit of an elite class, for military aggrandizement, or even for building up the industrial sector of the economy. Human life is precious. There is no moral justification for callousness about "plowing under" a generation or more of farm people in order to achieve faster economic growth.

It follows that economic growth should be achieved not by further submerging the disadvantaged groups in agriculture, but rather by increasing their opportunities for productive work, either in agriculture or in other occupations. This will help them to contribute to expansion of national output.

4. Improved technology is a key to productive employment and higher output. And successful adoption requires additional investment in capital goods; but even more important, it requires investment in people who must learn new technical and management skills. One of the paradoxes in the less developed areas is that despite the abundance of unskilled labor, there is a shortage of manpower capable of planning, managing, and carrying out new enterprises and adopting new techniques. Scarcity of the management and technical skills that are essential to adoption of improved technology is likely to retard expansion of output in agriculture fully as much as scarcity of capital for new investment. But an intensive program can be organized to train management supervisors who can help farmers adopt improved farming plans. Such intensive temporary training courses will be necessary to get development programs started both in agriculture and in other industries.

5. A universal system of public education is one of the essential building blocks for a successful development program. Secondary school and university education should be available to all talented

youth regardless of cultural or economic status. Trained manpower will be needed for sustained development. Research also should be developed to furnish a foundation for better education at all levels, and to provide direct guidance for development programs.

6. We do need to recognize the potential conflict between needed investment for output expansion, and the pressure for more equitable sharing of the national product. The only acceptable solution to this conflict is to provide opportunities for all able-bodied people to do productive work in both agriculture and other occupations. Public works programs that increase the national output of food and other products may be necessary to provide initial employment. Such programs will require careful screening and selection of those which will yield the highest returns on scarce capital over a relatively short time period. The resulting increase in total output will permit gradual improvement in income per worker. But institutional arrangements will need to be modified, in order to encourage voluntary savings, to provide more equitable taxation, and thus to channel part of the larger income into private or public investment for continued expansion.

7. The farm sector of the economy can contribute at least a proportionate share of its current income for initial investment in development. Within the farm sector, some landlords and operators of some of the larger farms have incomes sufficient to provide capital formation, through both voluntary savings and higher taxes. Small investments per farm by many operators can result in rapid formation of capital. For example, only small expenditures are required to buy improved seed and chemical fertilizer. Paying part of the increased income in taxes will constitute a part of the temporary sacrifice for rapid growth.

Although some capital and technical aid can be obtained from abroad, the amounts available from this source can be expected to perform only some of the necessary catalytic functions, such as helping to establish research, educational, and other institutional arrangements. Adoption of adequate credit and taxation policies should be expected to provide most of the public and private investment needed to increase agricultural output.

8. Land tenure reform, more equitable taxation, and other institutional changes are likely to be needed in order to provide opportunities for all rural people to contribute to increased national output. If independent farming opportunities are provided for rural people, powerful forces will be set in motion to develop human potentialities and to accelerate capital formation. But, technical and management assistance, credit and other services will need to be provided in the transition period. Tenure changes can be instituted in ways that will facilitate progress, but usually if they come as a result of violent upheaval, they retard increases in both output and income to farm people.

9. If the obstacles to progress are removed, agriculture can become the generating force in economic development. It can furnish adequate food, provide necessary capital, and eventually, the trained manpower for other occupations. This can be achieved by finding ways to close part of the wide gap between the prevailing output of farm products and the physical potentialities that could be realized by adoption of improved technology.

10. If improvements in agriculture are initiated at the beginning of economic development, farm people will obtain higher incomes from the larger output. They will then have a better income base for larger savings and higher taxation. The construction phase of nonagricultural development also provides a base for larger savings and higher taxes. At a later stage, farm people will be in position to buy more industrial goods when such goods become available. Because of the nearly simultaneous growth in agriculture and other industry, balanced economic development will result.

11. The process of accelerated economic development is neither automatic nor costless. To achieve it will require careful advance planning, as well as coordination in execution. All citizens should be enlisted in the effort to achieve increased productivity. This will require assurance of eventual sharing in the fruits of progress. On this basis, patriotism and pride in achievement can become strong motivating forces. But the need for temporary financial sacrifices should be emphasized. All those who are able to bear the burden will be called upon for increased investment in both government and private economic activity.

12. Competent leadership is the keystone in the building of a self-sustaining economy. Leaders must have the will and the courage to institute changes. High talent is required for construction of a synchronized plan of development. Even greater talent will be needed by private enterprise and public agencies in carrying through the development plans. Most important of all, exceptional political leadership will be needed to persuade citizens of the need for temporary sacrifices, and for patience in waiting for the fruits of economic growth.

THE ECONOMICS OF AGRICULTURE'S
CONTRIBUTION TO ECONOMIC GROWTH

Simon Kuznets

[From "Economic Growth and the Contribution
of Agriculture: Notes on Measurement,"
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Oxford, London, Oxford University Press,
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[Professor Simon Kuznets of Harvard University --
world-famous for his studies and measurements of the
process of economic growth -- here explains in simpli-
fied form the economic theory of agriculture's con-
tribution to the growth process. Each portion of his
explanation serves in the original essay to introduce
a more technical discussion of the problems of measur-
ing the particular aspect involved. Although written
primarily to illuminate these econometric problems,
this essay in the truncated form presented here consti-
tutes one of the clearest and most readily comprehen-
sible explanations of the economics of agriculture's
role in development.]

These are
excerpts from
the original
essay.

The aspect of modern economic growth most easily
perceived and most commonly measured is the aggrega-
tive. In fact, the usual definition of economic
growth -- a sustained increase in a nation's total and
per caput product, most often accompanied by a sus-
tained and significant rise in population -- stresses
this aspect. The second interesting aspect is the
structural. The significant characteristics of the
[aggregative] rises associated with modern growth are
the large and rapid shifts that occur in the structure
of an economy -- in the relative importance of various
industries, regions, classes of economic units distin-
guished by form of organization, economic classes,

commodity groups in final output and so on. The frequent references to modern economic growth as "industrialization" and to its important constituent elements in terms such as "urbanization" and "mechanization," clearly indicate these structural aspects; while even slight acquaintance with the literature on economic growth reveals that the main burden of the analysis is not on the aggregative but on the structural characteristics. The measures usually provided are the familiar distributions of product, capital and labour among industrial sectors; among regions; between the private and the public sectors, and by further divisions within each; and among various socio-economic groups.

The third aspect is the international. We distinguish this aspect in order to stress the facts that, except for the single pioneer nation, all nations participating in modern economic growth view the prospects initially as the task of adopting (and adapting) potentials already demonstrated elsewhere in the world; that no nation can grow in an international vacuum; and that the process of a nation's growth involves a pattern of sequential interrelations with others -- more developed and less developed. In a sense, then, the modern economic growth of any one nation is a process of shifting from the underdeveloped to the developed group, utilizing the appropriate channels of international trade, finance and communications in general.

The three aspects are clearly interrelated. The rise in per caput product, essential to the aggregative view of economic growth, in and of itself means a shift in consumption and savings patterns and thus contributes to the shift in the industrial and other structures of the economy. On the other hand, it is the utilization of the technological potential of modern times through the development of new industries and new methods of production -- which means structural shifts -- that permits a rise in product per caput. And the aggregative growth and certain structural shifts provide the surpluses for international trade and capital movements; while the latter, bringing the benefits of international division of labour, are in turn conducive to the greater aggregative growth of the participating nations and thus to greater structural shifts within them. This close association is hardly surprising, since a nation's modern economic growth may be described as the utilization of domestic and international division of labour, under conditions of changing technology, to increase per caput product of a growing population.

Given this interrelation, it is often impossible to specify the contribution of a single industrial sector, say agriculture, to each aspect of economic growth. It would seem preferable to consider the contribution of agriculture to economic growth jointly in all three aspects of the process, and then examine the various ways in which such a contribution may be rendered. Some of these ways bear more directly on aggregative aspects of growth than on the structural; others bear

more directly upon the structural or international than upon the aggregative. But each has some bearing on all three related aspects of economic growth.

In considering the contribution of agriculture, or for that matter of any sector, to the economic growth of a country, we must first recognize an element of ambiguity. Since any sector is part of an interdependent system represented by the country's economy, what a sector does is not fully attributable or credited to it but is contingent upon what happens in the other sectors (and perhaps also outside the country). Thus, even if we deal with net product originating in, or contributed by, a sector, deducting the purchases or contributions from others and limiting the total to the product of the factors attached to that sector, the magnitude and movement of the net product so measured still depend upon the rest of the economy; and its product may perhaps be more correctly described as the result of the activities of the economy whose particular locus is the given sector -- rather than as a contribution of the given sector fully creditable to it as if it were outside the economy and offering something to the latter. But so long as we keep the semantic caution in mind, and remember that the capacity of a sector to "contribute" depends not upon the sector alone, no harm is done by retaining this familiar expression.

The first type of contribution of agriculture to the economic growth of a nation is that constituted by growth of product within the sector itself. An increase in the net output of agriculture, in and of itself, represents a rise in the product of the country -- since the latter is the sum of the increases in the net products of the several sectors. This type, we may call the product contribution, [and is] a contribution first to the growth of total net or gross product, and second to the growth of product per caput.

[Second,] a given sector makes a contribution to an economy when it provides opportunities for other sectors to emerge, or for the economy as a whole to participate in international trade and other international economic flows. We designate this contribution the market type because the given sector provides such opportunities by offering part of its product on either domestic or foreign markets in exchange for goods produced by the other sectors, at home or abroad.

Thus in the case of agriculture, we can envisage two contrasting situations. In one, agriculture engages 100 units of labour force to turn out 1,000 units of product without any purchases from other sectors, and thus in complete independence of the country's production processes. In another, agriculture engages 80 units of labour force and still turns out 1,000 units of product -- but does so by purchasing 200 units of fertilizers, etc., provided by 20 units of the country's labour force. In both cases, the net output of the economy, with the

same labour force, is the same -- 1,000 units of final goods. But in the second case we have market transactions and diversification of the structure of production.

The example is unrealistic, for the division of labour in the second case would, usually, result in an appreciably higher product per worker. Indeed, this rise is the very reason for the reduction in the economic independence of a sector and its engagement in trade with other sectors at home or abroad. But the illustration does emphasize the contribution of changes in a sector to the significant element in economic growth of diversification of structure -- the intensification of the internal and international division of labour. These changes are important in and of themselves -- apart from the contribution that they make to growth in total or per caput product.

Thus agriculture makes a market contribution to economic growth by (a) purchasing some production items from other sectors at home or abroad; (b) selling some of its product, not only to pay for the purchases listed under (a) but also to purchase consumer goods from other sectors or from abroad, or to dispose of the product in any way other than consumption within the sector. In all these ways, agriculture makes it feasible for other sectors in the economy to emerge and grow and for international flows to develop; just as these other sectors and the international flows make it feasible for the agricultural sector to operate more efficiently as a producing unit and use its product more effectively as a consuming unit.

The proportion of gross income accounted for by purchases from other sectors is clearly a crude and incomplete measure of the marketization of the production process in agriculture. We treat all agriculture here as one sector, disregarding the network of market transactions within agriculture -- transactions which presumably grow in absolute and proportional volume as agriculture becomes more specialized and diversified in the course of economic growth. A more complete measure would be based on records of outside purchases at each farm -- making it independent of arbitrary definitions of a sector. But so long as we understand what is involved in the marketization of the production process in agriculture, we need not dwell upon its measurement.

There is another question, however, viz. how to measure the "contribution" to economic growth. The measure just discussed is a gauge of relative importance of purchases from outside to the gross product of a sector -- not of their proportional contribution to a country's economic growth. We need here to define the aspect of the latter to which we think marketization contributes -- over and above its indirect contribution to total and per caput product.

The aspect is clearly development of sectors other than agriculture; and this could be measured by comparing the non-agricultural sectors in the country providing production goods to agriculture with all the non-agricultural sectors. In other words, the percentage of the growth in output of all non-agricultural sectors (including the transportation and other facilities involved), accounted for by the fertilizer, agricultural machinery and other plants that provide the production goods to agriculture, would measure the proportional contribution which marketization of the production process in agriculture made to the industrialization aspects of economic growth within the country.

We turn now to the increase in the proportion of agricultural net product which is not consumed within the producing farm or agriculture proper but is sold on the markets in which agriculture trades with other sectors of the economy or abroad. This trend is largely due to a rise in net product per worker within agriculture combined with the low secular income elasticity of the demand for agricultural consumer goods, but it may also reflect technical progress that reduces cost and facilitates transportation and trade over wide areas. The contribution to economic growth here is the release of a larger proportion of the net product of agriculture as a basis for demand for consumer goods (or, to a more limited extent, of producer goods) from other sectors in the economy and from foreign countries.

At the initial point of time, when agriculture accounts for a large share of the net output of the economy, the extent to which such product is traded with the other sectors has a major bearing upon the width of the economic base which these other sectors may enjoy. If, for simplicity's sake, we think of a closed economy, any difficulty in increasing the marketable surplus of agricultural product will restrict the growth base of the other sectors. Once growth occurs and is accompanied by a decline in the shares of agriculture in both product and labour force, the increased productivity per worker in agriculture reflected in these trends assures an increasing proportion of marketed agricultural net product and at the same time a decreasing proportional contribution of such marketings to the total product of the economy. In short, the market contribution of agriculture to a country's economic growth, strategic in the early periods of growth, must, in the nature of the case, diminish in relative weight once growth has proceeded apace.

The same conclusion is suggested by the third aspect of the market contribution of agriculture: that bearing upon the type of trading partner with whom market relations are established. The market contribution to economic growth will be the greater the higher the growth-inducing power of the trading partners whose co-operation via the market is being secured. The same volume of purchases by agriculture from a host of village carpenters, blacksmiths, etc., and from a factory

that produces agricultural machinery by advanced methods, will have different impacts on the growth not only of the non-agricultural sectors of the economy but also of agriculture itself.

It is in this connexion that the contribution of agriculture to exports assumes strategic importance, since in most countries modern economic growth is a matter of following the pattern set by the nations that have already experienced this process; and it is exceedingly important for a follower nation to trade with the more advanced countries which can provide it with the tools of modern technology. Even with allowance for capital imports, a country in the early stages of economic growth that cannot itself produce, even at high cost, the tools of modern technology, must be able to offer the more advanced countries a quid pro quo. It can do this only with products in which it has a comparative advantage; and in the nature of the case this advantage is likely to lie in natural resources rather than in skills. Since agriculture, after mining, is the sector in which natural endowments have greatest weight, it is hardly a surprise that in the initial stages of growth of many presently developed countries, agriculture was a major source of exports and that the resulting command over the resources of the more developed countries played a strategic role in facilitating modern economic growth. It is also apparent that, as economic growth continued, the advantage with respect to products affected by natural resource endowments might recede relative to that resulting from economies of scale and accumulation of skills in other sectors. Consequently, in addition to the reduction in the weight of agriculture in the total output of a country, there may be an even greater reduction in its share of exports. Thus the market contribution of agriculture, this time in specific connexion with the capacity of a country through international trade to tap the resources of the more advanced units, is likely to be large in the initial stages of growth (unless the mineral resources are sufficiently great to make agricultural exports less strategic) and bound to decline as economic growth takes hold in a country. While any detailed analysis of the relations touched upon here would raise difficult questions concerning the phasing of this process of building economic growth on trade with the more advanced countries, the substance of the contribution is clear and the measures, in terms of shares of exports and feasible imports of capital goods, are obvious without further discussion.

The third type of contribution by a sector to economic growth occurs when there is a transfer or loan of resources from the given sector to others. Thus if agriculture itself grows, it makes a product contribution; if it trades with others, it renders a market contribution; if it transfers resources to other sectors, these resources being productive factors, it makes a factor contribution.

The resources being transferred are either capital, or rather funds for financing acquisition of material capital, or labour. In the case of the former, two different types of transfer may occur. In the first there is a compulsory transfer from agriculture for the benefit of other sectors; and this is ordinarily done through taxation of a kind in which the burden on agriculture is far greater than the services rendered by government to agriculture (including an adequate share of overhead government expenses), the residue being spent by government for the benefit of other sectors. To illustrate, the government may use a tax on agriculture as its only revenue, and expend it all either on a subsidy to some manufacturing industry (thus in fact providing capital funds for the latter), or use it all in the construction of some public utility. To be sure, both the factory and the public utility contribute to growth within agriculture proper; but the direct contribution to economic growth is to the non-agricultural sectors, and this flow, originating in the agricultural sector, is not covered in its product or market contribution. The other form of capital transfer is, of course, lending, or the utilization of savings originating in the agricultural sector in financing the growth of the non-agricultural sectors.

We may now turn to the third type of factor contribution made by agriculture to the economic growth of a country -- the provision of labour. While this shift of labour from the [agricultural] to the non-[agricultural] sectors in the process of modern economic growth has become quite familiar, the magnitude of the migration and of the factor contribution involved may not have been given the attention that it deserves.

To begin with, we must stress the fact that through the periods under discussion and in almost all the countries, the crude (and refined) birth-rates of the agricultural populations were distinctly higher than those of the non-agricultural; whereas the death-rates were at least equal, if not lower, for the agricultural. This means that the rate of natural increase was very much higher for the agricultural than for the non-agricultural population; and consequently for the agricultural than for the non-agricultural labour force.

If we accept the interpretation of internal migration as a transfer of capital invested in human beings, this factor contribution of the [agricultural] sector to the growth of the non-[agricultural] sectors must have been quite large in the early and even later phases of modern economic growth -- since internal migration of the labour force was from the [agricultural] to the non-[agricultural] sectors and sizeable. And, granting that the "contribution" in question depends upon the employment capacity of the non-[agricultural] sector, we could still argue that the internal migration of labour from agriculture represents a large transfer of valuable resources to the non-[agricultural] sectors and a large contribution to the country's economic

growth. This conclusion has several implications, not the least of which is that the kind of investment in human beings that is, and can be, made in the [agricultural] sector determines the quality of an important part of the labour force in, and hence of its contribution to the growth of, the non-[agricultural] sector.

Secondly, if the share of the [agricultural] sector in the labour force and the relative magnitude of labour transfers from it decline, there is bound to be a decline even in the absolute value of the factor transfers thus made; and most certainly in its proportion to the stock of labour already available in the non-[agricultural] sector. After a while, although it may be fairly late in the course of modern economic development, the absolute numbers of workers in the [agricultural] sector decline; and transfers that may be a large fraction of the current labour force in agriculture would mean only minor fractional additions to the labour force outside agriculture, and for the country as a whole.

Finally, it need hardly be pointed out that what is true of internal migration applies to the international movement of labour which through the nineteenth and early twentieth centuries assisted a number of rapidly developing countries. This migration was most often from the agricultural sector in one country to the non-[agricultural] sector in another, and in that sense was similar to what we have been discussing -- except that the factor contribution was to the economic growth of another country. At some time, this may have had a curious effect on internal migration within the recipient country, impeding internal migration from at least some parts of the domestic [agricultural] sector. But these aspects of the factor contribution of the [agricultural] sector, while of great interest, would take us into an analysis of the growth process for different groups of countries that would be too detailed for treatment here.

THE RELATIONSHIP BETWEEN AGRICULTURAL
AND INDUSTRIAL PRODUCTIVITY

H. A. Oluwasanmi

[From "The Role of Agriculture in Nigerian Economic Development," paper presented to the Eleventh International Conference of Agricultural Economists, Cuernavaca, Mexico, August 1961, p. 4.]

[While the bulk of this paper by Professor H. A. Oluwasanmi of University College, Ibadan, deals with Nigerian agriculture, the following passage is of general applicability. It summarizes succinctly and clearly the reasons why rising agricultural productivity is essential to the establishment of growth of economically efficient manufacturing and other industries in a developing country.]

"Newly established industries in developing countries can hardly be expected to achieve immediately the same level of technical and economic competence as similar industries in technically advanced countries. For one thing, costs of machines, power, fuel and technical and managerial skills will be much lower for industries operating in mature economies than for industries operating in developing countries. For another, output per unit of labour will probably be higher in the advanced countries than in developing countries. Thus, industries in advanced countries enjoy real competitive advantage over similar industries in backward countries. This initial advantage may however be offset if there are present within the developing country cheap sources of labour and raw materials. The wage rate, and, therefore, the wage bill of the new industries will, to a considerable extent, be determined by the prevailing level of prices of food-stuffs. Similarly, the cost of raw materials to industries will depend upon the efficiency of the raw-material producing

section of agriculture. In effect, the rate of expansion in the non-agricultural sectors of the economy is closely tied up, in the transition at least, with the level of productivity in agriculture. On the demand side increasing agricultural productivity means [in the words of W. Arthur Lewis] that the farmer 'has an ever-increasing surplus to offer in exchange for manufactures; ever-increasing productivity in agriculture means an ever-increasing market for manufactures.'"

INCREASING THE PRODUCTIVITY OF SEMI-COMMERCIAL AND SUBSISTENCE FARMING

Sherman E. Johnson and K. L. Bachman

[From "Technical Peculiarities of Agricultural Supply," Proceedings of the Tenth International Conference of Agricultural Economists; London, Oxford University Press, 1960, pp. 75-81.]

These are
excerpts from
the original
paper.

In many areas formerly devoted almost entirely to subsistence farming, there is now ferment and striving for reorganization of agriculture in order to increase total output and output per man-hour. In some areas, considerable progress has been made in mechanization, other technological advances, and greater commercialization. Farm output tends to increase as improved technology and greater commercialization are achieved, mainly because of better practices and the release of cropland used for producing feed for work animals.

Most of the farmers of the world, however, still operate very small farms mainly by hand labour with the assistance of simple tools and perhaps one or two draught animals. On these farms, the supply of agricultural products is subject to three unique conditions.

First, land and labour constitute the large bulk of the inputs. Only a small part of the production resources is purchased. In Greece, for example, purchased

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inputs account for less than 10 per cent of the product, whereas in the United States and some other highly commercial countries, more than 50 per cent of the product is represented by purchased inputs. The associated low levels of earnings provide little margin for improvement in production. With little other employment available, there is strong pressure to continue farming, and these land and labour resources are retained in agriculture when farm prices decline. Production is likely to continue at the same pace so long as returns provide subsistence and cover the cash costs.

Second, on most of these farms a major part of the production is for the use of the family. In general, production plans are not oriented to market demand but to family needs and also to the labour and land of the operator who has little money for purchased inputs. Because his first aim is to meet the subsistence needs of himself and his family, the quantity he markets varies substantially with yields. Usually, the market for small quantities sold by individual producers is not organized for wide distribution of output. Frequently, therefore, when production is in excess of the usual needs of the local area, gluts are encountered, and the products clear the market at low prices despite unsatisfied needs in other areas within the same country. Because of the nature of individual production plans and the uncertainty as to price, there is little response to either upward or downward movements in farm prices and costs.

Finally, traditional tenure institutions also play a significant role in impeding changes in agricultural supply, and particularly in increasing the supply of farm products. Where large landed estates are prevalent, traditional modes of farming are continued because they are simple to prescribe, require little knowledge or attention on the part of the landlord, and the problem of sharing expenses is uncomplicated. Sometimes also, there is lack of confidence in the peasant's ability to carry out such improvements.

Despite conditions which discourage changes by individual farmers, progress is being made. Significant increases in the supply of agricultural products are being obtained in several subsistence farming areas. Governmental policies that encourage adoption of new technology and increased output have stimulated and aided these changes.

Countries characterized by subsistence farming frequently experience food shortages because of the narrow margin between the minimum needs of the population and actual scarcity. Unfavourable growing conditions can eliminate the small surplus above the minimum needs. Developments of this kind leave the non-farm population in a precarious position unless additional imports can be obtained. Protection against the threat of food deficits, together with the desire to improve present levels of food consumption, leads to concern about increasing farm output.

Some countries, however, need to recognize more clearly that the threat of food deficits cannot be eliminated by expanding the supply of agricultural products without accompanying improvements in technology and in the organization of agriculture. In fact, expanding agricultural production by a proportionate increase in workers on the land may eventually accentuate the threat of food deficits because a larger population in agriculture may find it hard to maintain even present levels of output per acre and per worker. In most countries in which a high proportion of the population is in agriculture, the agricultural population has increased since World War I. This positive relation between increased total output and more farm workers is in contrast to the even more rapid increase in output along with substantial reduction in agricultural population in countries where commercial farming predominates. Sustained improvement in levels of living can be obtained only by increasing production per farm worker and thus widening the margin of output above the minimum needs of the farm population. This will involve adopting new technology and changing the economic organization of production and distribution of farm products. Such changes frequently are considered under the general term "technological advance."

Subsistence farmers can advance technologically by increasing output on their present units through use of better seed, commercial fertilizer, and improved cultural practices. These changes involve more intensive use of both labour and capital on present acreages. The first fruits of such improvement redounds to the farm families themselves. They have more products available for direct consumption and a little more surplus for sale. Frequently, even these small changes are difficult to carry out because of the lack of knowledge, skills, and funds necessary for financing the change.

Eventually, however, more complex changes are needed if productivity is to continue to rise significantly. The process of increasing total farm output and output per worker also will require new systems of production, increased mechanization and larger farm units. Available evidence suggests that, with appropriate changes in technology and systems of farming, there are many instances in subsistence farming areas where additional production might be obtained at relatively low cost in relation to returns. However, greater income possibilities from additional production do not lead most subsistence farmers to produce more. This paradox deserves further consideration. How do we explain the persistence of this generally accepted gap between the potential costs and returns of additional production on these farms?

Part of the answer may lie in what subsistence farmers attempt to maximize. Brewster and Parsons have emphasized the importance of the "frame of mind" in determining farmers' production responses. We raise the question as to whether the subsistence farmer is dominated by a frame of mind which leads him to work hard carrying out the job of

farming, but in which he visualizes the job as largely within the limits of the resources he owns or controls and the farming systems commonly in use. As a consequence, he uses his labour, land, tools, and limited funds as effectively as possible in following the accepted farming system, hoping that with divine assistance a satisfactory product will result. The level of output attained, however, may be considerably below the level attainable with improved technology and a new combination of inputs.

To consider using borrowed funds to establish complex new combinations of factors and systems of production probably requires a frame of mind that differs from one which is content to continue the present farming system. Even among commercial farmers many do not readily consider changes of this type. The required shift in frame of mind may represent more of a change than is appreciated by persons with a commercial farming background. Furthermore, the concept of equating added costs with added value of sales is not meaningful to subsistence farmers who produce primarily for home use and have experienced sharp changes in the prices of their residual products for sale.

Any change that involves increased output requires, first, awareness of possibilities, then motivation to initiate it, a favourable institutional environment for its development, availability of finance, and the managerial and technical skills needed to carry it out. Motivation for change is lacking if the improvement appears to be impossible of achievement. Because of the meagre incomes and low levels of living in subsistence farming, there is a high propensity for direct consumption of any increase in output and income. Unfilled wants for food, clothing, and other items of consumption limit the funds available for investment in technological improvements represented by capital goods. Consequently, for many farmers the problems of capital accumulation present a formidable barrier to achieving desirable changes. Frequently, also, loanable funds are scarce, and even if credit is available, the terms are likely to be burdensome. Existing land tenure arrangements also may prevent a farmer from making improvements or from sharing equitably in their benefits.

Therefore, technological advances designed to increase output per worker involve much more than purely technical improvements. They require a combination of technical, economic, and institutional changes, and above all competent local leadership. In most countries, vast improvements in research and especially in education are needed if rapid technological advances are to be sustained. Technical assistance and supervision may need to be provided to teach the technical and management skills required for successful adoption of the new methods. Concurrent changes in credit and tenure institutions may be necessary also; and a central government that can offer security, encourage progress, and provide a stable currency is essential to sustained advances.

Development of new land areas can be a means of increasing output per worker and advancing the national welfare. But if this goal is to be reached, land development will need to be combined with adoption of new techniques, larger units, and more equipment per worker, as essential elements in the process of increasing output per worker. In recent years, large-scale land improvement projects have been undertaken under government auspices in many countries. They involve clearing, drainage, irrigation, and other improvements that require large capital outlays. Considerable time elapses from the initiation of such projects to their completion and use for agricultural production. Usually, the goal is to establish farms with emphasis on commercial farming. But the transition is difficult both for the government that undertakes it and for the settlers on the new project. New technical and management skills must be learned. Credit is needed for land improvement, for equipment, and for the larger volume of production. Local markets and transport to consuming centres must be established. For these reasons, emphasis on programmes to increase output on present units may yield greater returns than will development of new land in the earlier phases of an agricultural development programme.

If the shift to a more commercial agriculture with increased productivity per person can be accomplished in a developing economy, there will be large potentialities for filling unsatisfied needs. The population in undeveloped areas usually has a relatively high income elasticity for consumption of farm products. Therefore, improvement in incomes will result in increased demand. Demand may even outrun the increase in farm output with inflationary results. Once the volume of farm output has increased, however, there is no road back to lower output levels. Production increases can be slowed down or halted, but contraction of output is difficult. Shifts in production to products with more favourable markets are sometimes feasible, but contraction of total output is perhaps even more painful on semi-commercial and subsistence farms than on commercial farms.

AGRICULTURAL CREDIT FOR SMALL FARMERS

Horace Belshaw

[From Agricultural Credit in Economically Underdeveloped Countries; Rome, Food and Agriculture Organization of the United Nations, 1959, FAO Agricultural Studies No. 46, 255 and xv pp.]

[Dr. Belshaw's book is the leading work on improving agricultural credit facilities for small farmers in underdeveloped countries. It covers in considerable detail the nature of the demand for and supply of agricultural credit; methods and criteria for expanding credit and improving its administration; the roles of cooperatives and of supervised credit and the relation of agricultural credit for small farmers to the banking systems of underdeveloped countries and the fiscal and monetary policies of their governments.]

The book is too comprehensive and detailed to be summarized. However, the following excerpt contains Dr. Belshaw's analysis of the essence of the problem of improving agricultural credit for small farmers in underdeveloped countries -- converting traditional "static" credit, which merely permits peasant farmers to maintain, or retard deterioration of, their position into "dynamic" credit, which enables them to increase their productivity and thereby improve their own conditions of life and those of their countrymen:]

These are excerpts from the book.

Partly because of the conditions [affecting the demand for agricultural credit], partly because of the characteristics of supply, agricultural credit has not usually led to a cumulative increase in productive power. At best, credit has remained static, by which is meant that, after paying interest and repaying debt, the assets of the farmer, and his capacity to produce

and maintain levels of consumption for himself and family remain unchanged. This normally implies that the credit (i.e., debt) cycle must be repeated to maintain his position. Conditions of supply tend to contribute to the same result.

Very often the purposes for which credit is used, the manner in which it is applied, and the conditions under which it is given, lead to a deterioration in his position. This is shown in many countries by the large numbers who lose their lands, and by the increase in tenantry, because debt has become too burdensome.

The primary objective is to convert static into dynamic credit: to use it to promote a cumulative increase in output. But too much must not be expected of credit by itself to achieve this goal. The bulk of the credit for working expenses will normally be required to maintain levels of production, even if the over-all result is to promote growth because there is a residual in excess of the above amount. Although we aim at a progressive increase in output, the process may be discontinuous. Improvements occur leading to an expansion of output, which is held for some time until a further advance is possible. Meanwhile adequate static credit is necessary to sustain the position.

The first requirement to promote growth is to increase the amount available. This leads us to consider the sources of funds. The second is to reduce the cost and improve the conditions under which it is given. A reduction in cost not only improves the share going to the peasant, but also makes it profitable to undertake investments which otherwise would not be economic. The latter result will also require that the terms of repayment and the length of loans are adjusted to the convenience and capacity of the farmer as affected by the accrual of additional income resulting from the loan. The third requirement is to integrate credit with assistance in applying new techniques and promoting better farm management. Even if more credit is given it may not promote growth unless these conditions are met.

But the conversion of static into dynamic credit will also depend on other wider considerations. The use of credit to promote economic growth depends, for example, on a favorable general climate for economic development, on the success of over-all development programs in stimulating demand and developing the other sectors of an economy; and on adequate investment in social overhead, especially in transport and marketing. It may require land tenure and other reforms to increase the share going to the farmer and improve incentives.

If agrarian reform improves the share going to the farmer, this in a sense converts static into dynamic credit because his over-all position is improved; but it arises from a redistribution of income, and may only be a once-for-all gain. This is important, but the objective

should go further to increasing aggregate output and output per head, and plowing back increases in income for further improvement. This last desideratum re-emphasizes the necessity for promoting an increase in rural savings and their better use.

Credit will only be dynamic when confined to those farmers who have actual or potential capacity to produce beyond the amount needed to sustain the minimal levels of consumption required for health and efficiency, meet charges and repay the loans. To give "soft credit" by including submarginal farmers, whose holdings are too small, or who are so inefficient that they will not have repayment capacity does not promote growth and may in fact retard it by diverting funds away from purposes which do. Soft credit will also endanger the credit system. Credit may be used, of course, to promote subsidiary occupations, or finance the aggregation of holdings so they become large enough to meet the test of repayment capacity. But the principle remains, that the resources of the credit system should be regarded as a revolving fund, not something to be used up.

This does not mean that submarginal farmers should not be helped, or that the credit should not be given for consumption; but the element of grant which the former entails should be clearly distinguished from credit. Even if the credit institution is the agent of the government in dispensing such grants, they should not be the financial responsibility of the credit institution.

MARKETING PROBLEMS OF SMALL FARMERS

M. L. Dantwala

[From Proceedings of the Tenth International Conference of Agricultural Economists; London, Oxford University Press, 1960, pp. 252-254.]

[In commenting on a paper at the Conference dealing primarily with marketing, communications and transport in developed countries, Professor M. L. Dantwala, University of Bombay, observed:]

These are excerpts from the original paper.

One point which has great significance in many Asian countries relates to the unequal bargaining power of those who provide the marketing services (the middlemen and the traders) on the one hand and the producers and consumers on the other.

It is a strange feature of the economic system that trading profits are generally high in the poorer communities. In India our experience shows that marketing margins are unconscionably large in the tribal areas. Further, although I am unable to adduce statistical evidence, I think these margins are larger for cereals than for industrial raw materials, where the consumer-cum-manufacturing interests are well organized and powerful. These powerful interests would not permit trading margins larger than are warranted by actual costs and, if and when necessary, they will themselves enter the trade. The situation naturally varies from commodity to commodity, depending upon the strength of the consumer's interest -- for that of the producers, with the exception of the growers of plantation crops, may be taken to be almost identical. At least, if such a differentiation exists between the marketing of cereals consumed by a large mass of unorganized consumers and that of industrial raw materials used in

organized industries, it gives added support to the contention about bargaining power.

[Mention has been made] of vertical integration as one of the devices for reducing price uncertainties. The integration envisaged, I presume, is between the producing and the marketing firms. Instead, what actually happens is an integration of manufacturing and marketing firms or, if not integration, a well-understood liaison. In this case, the consequences of vertical integration are entirely different. Where a few powerful buyers dominate the market, there is certainly a possibility of exploitation of the primary producer. I would like to submit, however, that no hasty conclusion should be drawn.

[It has been] rightly pointed out that mere absence of collusion may not be a conclusive proof of absence of exploitation; a non-aggressive attitude can be sufficient to modify fully competitive prices. But does that mean that aggressive bidding and stubborn refusal to share the market are necessary conditions of free competition? Suppose a non-exploitative co-operative organization (of either manufacturers or consumers) enters the market tomorrow, what would it be expected to do? Resort to aggressive bidding to prove its bona fides? I would submit that each situation will have to be judged on its merits.

Before I come to the next question of institutional remedies, I would like to hint at another aspect of this problem. In marketing, as in farming, there are both big and small operators. The small trader is often ineffective in the context of aggressive buying by the big, but he may not be ineffective in a situation of less-than-competitive prices created by a "non-aggressive attitude" amongst the big operators.

Regarding the institutional remedies, I would like to emphasize that in the absence of comparable bargaining power, many of the improved devices and regulations may not yield the desired results for the protection of the producer and the consumer. Such improvements as regulation of up-country markets, grading of produce, provision of storage facilities, etc., are of course essential. But, as a study of regulated markets in Bombay State showed, even the most stringent provisions of the appropriate Act were somehow circumvented, and the needy seller was not in a position to resist. Thus, the provision that all sales must take place by auction in the market place was occasionally evaded. The real sale took place outside the prescribed market place and the formalities of auction were ceremoniously gone through, the original buyer if necessary out-bidding his competitors, since the transaction was already completed beforehand. My point is that the ultimate guarantee of good marketing lies in the equality of bargaining power as between buyer and seller. Regulation of marketing operations and procedures can eliminate crude and obvious malpractices such as numerous levies for charitable and other purposes, frauds in weighing

and so on, but they may not be fully effective in preventing the exploitation of the primary producer. Provision of co-operative credit, marketing, and warehousing, however, is on a different footing; for it helps to increase the bargaining capacity of the farmer.

FINANCE FOR AGRICULTURAL DEVELOPMENT

E. de Vries

[From "Finance for Development,"
Proceedings of the Tenth International
Conference of Agricultural Economists;
London, Oxford University Press, 1960,
pp. 284-289.]

These are
excerpts from
the original
article.

Finance for [agricultural] development should be considered in a wide framework. It can be studied, discussed, and pursued only in relation to the overall development of the country or area concerned. In many cases it would be difficult to isolate agricultural investment from other types of investment. The underpinning economic infrastructure, mainly transport, communications, and power must be adequate. But the social infrastructure, e.g. health services, education, water supply, housing, must likewise be taken care of, lest the directly agricultural investments should remain largely unproductive. Furthermore, agricultural development cannot be isolated from industrial development and urbanization. In a dynamic economy these are necessary to provide markets and an outlet for surplus labour. A growing and diversified market for farm products, and labour opportunities for rural people outside agriculture, are indispensable to make agricultural development profitable. In this paper I shall not deal with this prerequisite, but rather assume that it is being provided for. I shall touch only briefly upon the economic and social infrastructural investments.

All in all, investments around and supporting agriculture are quite large, often considerably larger

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than agricultural financing per se. In the more immediate agricultural field, investments are generally a combination of: (a) private, non-institutionalized (both in money and in kind); (b) private, institutionalized; (c) public.

The fields of investment can roughly be divided as being: (i) permanent land improvement or reclamation; (ii) general services to farmers: research, extension and vocational training, and marketing; (iii) long-term investment in requisites (buildings, livestock, machinery); (iv) short-term investment in agricultural production. Considering that investments in transportation, education, and so on are closely interrelated with agriculture, it is evident that the last four categories have no strict borderlines.

Farmers operate under a great variety of economic, social, political, and technical conditions, and one could hardly expect to find a global systematic approach to financing. The diversity in methods is so great that one may ask whether there is any relation between the structure of agriculture and the pattern of financing. Historically, different approaches have been made, in circumstances which perhaps vary so much that the differences were justified. But the resulting pattern of financing and structure of agriculture bear scrutiny.

One approach is to provide transport, marketing facilities, and markets. The peasant will indeed respond to this with increased productivity where there is enough surplus land and labour, as the rapid development of peasant cultivation of coconuts, rubber, cocoa, coffee, and some other commodities for the world market proves. The process is ubiquitous; therefore we do not have to search for socio-cultural limitations. They are technico-economic. As long as only ocean transport was plentiful and cheap, the area covered by this recipe was so small that rapidly expanding world markets were undoubtedly adequate. Since World War I, however, road building, the use of trucks, and increased government activities in providing communications in general, have brought virtually all areas with good quality surplus land and labour within reach of the world market, resulting in danger of imminent over-production.

The second approach is to liberate the peasant from the private moneylender or landlord, and to organize governmental or co-operative credit. This is indeed a measure of relief where there is a large amount of surplus labour on insufficient land. The peasant, however, must change from non-institutionalized, flexible sources and non-punctual, heavy commitments to bureaucratic, non-flexible sources and punctual, not so heavy commitments; and this change is not easy. He will try to use both channels of financing and the relief is incomplete or temporary. It has become clear also that land reform, by dividing large holdings into small independent farm units, generally increases

the need for development financing more rapidly than the new opportunities can provide for. Co-operative credit societies will flourish when the circumstances are favourable but in themselves can do little to change the environment if it is unfavourable. As a whole, therefore, this recipe has a rather limited effect on development.

The third approach is to provide for land improvement (irrigation, drainage, flood control, mechanical reclamation and reallocation of holdings). With modern machinery, governments or semi-government organizations can indeed do a lot to improve the capabilities of the soil and the opportunities for peasants to raise productivity. International agencies with advice and funds have done a great deal to assist governments. Some kind of permanent land improvement is often a prerequisite for any further movement in the right direction. But experience with some of the largest projects all over the world shows that often not enough financial resources are available to put the new land to proper use. Consequently, the large investments do not give maximum results.

Lastly, efforts can be made to stimulate people to organize their self-development (community development and similar devices). This has some of the elements which have been lacking in other approaches in the past. Indeed, unless farmers themselves learn how to use new opportunities -- technical as well as economic -- general provisions will help but little. Here again, however, experience shows that too often land tenure is unfavourable, or marketing and transport deficient, or the soil-water relations unsatisfactory, or advisory services lacking. More, therefore, will have to be done than just helping people organize themselves.

These are the four most important general avenues of approach to the problems of directly or indirectly stimulating and financing agricultural development. They all are relatively costly in the sense that from a macro-economic point of view rather large investments are necessary to raise production. For land improvement, the ratio of capital cost to output varies from around 2.8-3.5 in countries with a favourable land-to-man ratio to 5.5-7.0 in densely populated areas. In this sense, agriculture is a capital intensive industry.

Society as a whole has such great interest in adequate and expanding food production in areas with an unfavourable land-to-man ratio that subsidies on projects for land improvement which reduce the "private capital coefficient" to around 3.5:1 seem justified. Consequently, most long-term financing of permanent land improvement is done through governmental or international agencies. This puts a heavy burden on the economy of low-income countries. They should draw some consolation from the fact that where unutilized labour or local materials can be used, the social cost of the investment drops. Governments and

communities should, wherever possible, use this device to decrease the capital coefficient. However, it is not possible to substitute legal measures (land reform, registration or auditing of co-operatives, etc.) for substantive investments. Nor is it possible to rely upon private initiative alone to make use of overall government provisions (transport, power, irrigation and the like). Even where these private forces are ultimately sufficient to use the new facilities, valuable time is lost.

Agriculture almost everywhere, and definitely during a process of changing structure, must be assisted by governments and international agencies in financing change and development. If none of the main approaches to this problem have been a full success, what then can governments do? Perhaps it is at this point that the more highly developed countries have useful experience. Over the last century governments and farmers' organizations have increasingly learned to find out and relieve bottlenecks in the structure of financing. In countries with highly developed private banking, farmers' organizations, internal and external markets, governments nevertheless play an important role in nearly all fields of investment for agricultural development. Most of these countries did not start with planning for overall agricultural development. Farmers' organizations and governments have rather learned to discover where exactly farmers feel the shoe pinch. By doing so, the priority of measures to be taken has shifted from one field to another, and all sources of finance have alternatively and concurrently been used. Often this may have appeared to be a very pragmatic approach, but in fact these activities have brought about the successive abolition of bottlenecks, and have thereby also led to the disappearance of clear-cut priorities, and essentially to a philosophy of comprehensive approach. It should be feasible to speed up this process of trial and error by conscious survey, research and planning for a coherent approach. In this the four approaches mentioned above may all be useful, and action in all main fields of investment will be necessary.

A PROGRAM FOR LATIN AMERICAN
AGRICULTURAL DEVELOPMENT

[From "An Agricultural Policy to Expedite the Economic Development of Latin America," Economic Bulletin for Latin America; Santiago, United Nations Economic Commission for Latin America, Vol. VI, No. 2, October 1961, pp. 7-11.]

[The Joint ECLA/FAO Agriculture Division prepared this analysis of the problems of Latin American agriculture and the means by which they might be overcome. The following excerpts from Part III of this long article summarize the action recommendations believed desirable by the ECLA Secretariat and the UN Food and Agriculture Organization:]

These are excerpts from the original article.

In order to achieve the objectives of a policy of accelerated agricultural development and redistribution of income, Latin American Governments could give earnest consideration to a series of instruments and measures. All of them are proper subjects for broad international co-operation. They cannot be carried out efficiently unless a development programme is formulated for each specific case and programming machinery is established on a continuous and permanent basis. It should be pointed out, however, that the measures listed here are calculated to form a consistent whole and should be applied simultaneously. If any one of them can be considered a prerequisite to the success of the others, it would certainly be land reform.

Investment in Rural Public Works and in the Improvement of the Rural Infrastructure

The chief objectives of public investment in agriculture are to provide full employment as soon as possible to all rural workers who -- in accordance with

the targets of agricultural production -- are unable to find immediate employment in agriculture proper, to eliminate seasonal unemployment and to provide agriculture with the means for producing efficiently. The most important projects to be carried out should include, in principle, the following:

- (a) dams, tapping of rivers, canals and other irrigation works wherever feasible;
- (b) levelling of irrigated areas to make better use of the water;
- (c) drainage canals and other works to clear swampy farmland;
- (d) terracing, tree-planting and other soil conservation measures wherever required by the topography and condition of the land;
- (e) construction of roads of all kinds both to improve communications in existing agricultural areas and to open up new areas;
- (f) building of warehouses, silos and storerooms for the storage and orderly distribution of products;
- (g) improvement of rural housing and public buildings, particularly the building and reconditioning of schools.

Generally speaking, these public works do not require a high input of capital and do not therefore affect the balance of payments by needing substantial imports of equipment. Under these conditions, the problem of financing this type of work can be reduced to manageable proportions so far as foreign exchange is concerned, and does not present insoluble problems with respect to local currency. Nevertheless, a public works programme of the magnitude envisaged here might place a considerable financial burden on any Latin American country, particularly those with a very inadequate infrastructure and where nature is particularly stern. In some cases, it might perhaps be necessary to introduce methods representing a minimum cash outlay. In other words, an attempt might be made to induce farmers who will derive direct or indirect benefits from the public works programmes to participate in the work of carrying them out, particularly in the case of smaller works the purpose and desirability of which are readily appreciated by rural communities.

Land Reform and Supplementary Measures

(a) Land reform

The main purpose of land reform as an instrument of economic and social development is the redistribution of income and the increase of productivity. Land reform calls not only for settlement programmes to develop virgin State-owned land and schemes and for the regrouping of small holdings into units of more efficient size, but also -- and these are its primary purposes -- the redistribution of large holdings, a

complete change in the relationship between labour and employers still existing in certain areas and certain types of agriculture in Latin America, and also the establishment of minimum wages and social security systems.

The mere redistribution of land resources will not by itself guarantee expeditious, spontaneous and immediate agricultural growth. So profound a change requires the simultaneous solution of many problems and changes in many aspects of the institutional framework of agriculture which are different from that of land tenure and bear no relationship to it. To achieve the aims referred to -- increases in production and productivity, redistribution of income and the broadening of the market -- over-all agrarian reform should be bolstered by such services as will ensure that the new landowners can accurately measure demand and co-operate in fulfilling the production targets set in the development programme. From a political point of view, there should be no insuperable obstacles, so long as the present landowners are properly compensated in accordance with the customs and circumstances of each country.

The financing of land reform -- above all the payment of compensation to the former landowners -- is usually considered to be more or less impossible. This is not, however, true, and for the following reasons:

- (i) Many of the present producers -- particularly in latifundia and minifundia -- are producing at the lowest levels of efficiency. As rural reorganization of the type outlined here would make for a considerable increase in yields, the new producers could contribute to the payment of compensation over a suitable term and it would not then be necessary for the State to assume additional obligations;
- (ii) In cases where, for internal reasons, compulsory land reform cannot be carried out, and in other cases where the expropriation and reorganization of farms must proceed over a relatively long period, a possible solution would be to levy taxes directly proportionate to the productive capacity of the land. Such taxation would make it possible to hasten the process of splitting up the land owned by inefficient producers, as they would then be obliged to sell their land or hand it over to the State.

At all events, it should be stressed that taxation of idle or ill-managed land is a necessary instrument of land reform, although for reasons different from that just outlined. The "price" of the productive factor that is land is unnecessarily high for various reasons; among these mention may be made of the relative scarcity of easily

accessible fertile land, the social prestige attaching to land ownership in Latin American society, the reserve value that land represents in inflationary conditions, the tax evasion which it permits, etc. In such circumstances, land -- in terms of yield on capital -- seems a poor business proposition in comparison with investment in other sectors. The introduction of taxes involving a compulsory increase in the supply of land on the real estate market would tend to reduce the price of land and, as a result, raise the economic potential of agricultural concerns. To the extent that such an aim could be achieved, private investment in agriculture and the use of land as a productive factor would increase.

(b) Education and training of personnel

One of the main factors affecting productivity is the level of education of the rural population. In this respect, there are differences between the various countries of Latin America; the most notable of these, however, is the difference between educational levels in rural areas and urban centres. The difference between the educational facilities provided in the two sectors is very wide and places the rural areas in an extremely precarious position. Consequently, the absorption of new agricultural techniques and knowledge is made very much more difficult. Illiteracy, which is prevalent among the rural population, is not the best of allies for technical progress.

Accordingly, the need is not only one of increasing the number of schools and teachers but also of reforming the type of instruction provided in rural communities, placing greater emphasis on practical training in more efficient work methods in order to give greater encouragement not only to pupils but also to parents. At other levels, intermediate instruction should be given in schools of applied agriculture, engineering and rural crafts, and the training of experts and research workers in matters connected with agriculture should be increased. As regards the latter point, consideration should be given to the need for a higher degree of specialization in present courses in agricultural science.

(c) Research and extension services

To achieve a swift increase in production and an improvement in productivity, the use of more advanced farming methods and practices must be introduced and made general. The pursuit of higher standards of technique implies in many cases the need to:

- (i) investigate the best possible techniques in each case by developing the most productive seeds, plants and livestock, as well as the best methods of cultivation, livestock care and feeding, application of fertilizers, insecticides, use of irrigation water, spacing, etc.;

- (ii) disseminate such knowledge widely among all producers through a well-equipped extension service;
- (iii) closely supervise inexperienced farmers through the same extension services to ensure the correct use of the new techniques during the period of apprenticeship and training which will doubtless be necessary.

In addition, extension services can help to improve the educational levels of the adult rural population. The dissemination of information on farming methods is really a type of education carried out mainly on the farm and in the home. Its chief purpose is to explain the production and marketing methods which will bring about an increase in income, and to teach rural families how to achieve a more comfortable standard of living.

(d) Marketing

The markets for agricultural products in Latin America suffer from a strong tendency to price instability. Among the factors accounting for this are (i) the seasonal nature of harvests; (ii) the difficulties standing in the way of making output match demand, owing to uncertainty about weather conditions and yields; (iii) the low price-elasticity of demand for some agricultural items in the high-income level importing countries; and (iv) the delay with which -- and sometimes the contradictory manner in which -- supply responds to movements in the prices paid to the producer.

Accordingly, to achieve the increases in supply which a developing economy requires, and to raise the income levels of producers, it is essential to improve marketing systems by building warehouses, silos, refrigeration plants, storage facilities and distribution centres; by improving transport facilities and handling and classification methods; by establishing market information services and eliminating monopolistic interests and other middlemen who serve no useful economic purpose. In present circumstances, a very high percentage of the price paid by consumers for agricultural commodities remains in the hands of money-lenders and intermediaries, to the detriment mainly of the small farmers. The lack of storage facilities leads to considerable wastage of agricultural products and this has direct repercussions on farmers' incomes. Inefficient marketing tends to rob farmers of the favourable effects of expanding demand. The efforts made by a number of Latin American countries to improve marketing standards have not only improved output and raised farmers' incomes but have also contributed to reducing the prices paid by the consumer.

(e) Credit and subsidies

In most of the Latin American countries the agricultural credit institutions are unable -- for want of funds or owing to legal limitations, especially with respect to acceptable securities -- to give effective support to an agricultural development policy such as that outlined in the present article. The availability of liberal credit facilities adapted to the real requirements and the juridical characteristics of the new enterprises created by agrarian reform is an essential requisite if these latter are to be in a position to equip themselves properly and purchase the inputs required by modern technique. The system of "supervised credit," which has been successfully tried out in several parts of Latin America, might be extended to benefit all the new agricultural entrepreneurs.

In addition, consideration might be given, in accordance with each country's circumstances, to the granting of subsidies for the purchase of seed, stud animals, fertilizers, pesticides and machinery. Similarly, the transport of these inputs and of the farm produce itself might be subsidized. By these means, the farmer's real earnings could be improved without the urban consumer's being saddled with price increases. The burden could thus be shifted to the taxpayer, who bears a share adjusted to his income level.

(f) Industrialization in rural areas

The establishment of rural industries, and the decentralization of industrial development in general, constitutes another means of providing employment for rural labour without speeding up migration to the towns. This type of work could be arranged on a part-time basis to avoid reducing the manpower contingents available at busy seasons. It should be noted that many rural industries entail substantial capital investment, and sometimes seem to be more highly capitalized than certain of the large-scale urban industries in relation to their volume of production and the amount of employment they provide.

The industries that seem best suited to the rural environment are connected mainly with the transforming of agricultural commodities and include dehydrating and packing of fruit and vegetables, extraction of oils, tanneries, dairies, mills, sawmills, etc. Also of interest are those producing articles and utensils to serve the immediate purposes of farms or works for public use -- such as bricks, tiles, doors, windows and frames, cordage, and clay or earthenware household utensils -- as well as the repairing of machinery and the manufacture of simple tools.

(g) Living conditions

A very important aspect of the problem, which is closely related to the question of public investment in rural areas, is the direct improvement of the living conditions of country families. In many parts of Latin America -- particularly in the tropics -- it is essential that the rural areas be sanified and the diseases which reduce the population's energy and capacity to work (such as malaria and filariasis) be eradicated. Again, the problem of housing for settled families -- already discussed in connexion with the public works programme -- has an important counterpart in respect of the migratory labour force, which, in moving from place to place, often has to work in highly unsatisfactory conditions in the areas where coffee, cotton, sugar-cane, etc. are grown. An urgent need in these areas is the setting-up of conveniently-situated camps where the migrant workers and their families will find decent accommodation, schools, medical attention and other services. Such camps would also enable the necessary nutrition programmes to be arranged, especially for children.

(h) Co-operatives

The establishment of a new institutional framework for Latin American agriculture, such as that described, might encounter serious difficulties with regard to the organization of the area affected by land reform in suitable farm units capable of absorbing modern techniques. One method of solving the problem might consist in the organization of co-operatives. In this connexion, consideration would have to be devoted to two principal cases: (i) the organization of currently independent small-scale producers, who are running farms of very limited size; and (ii) the management of large estates affected by the reform.

From another point of view, co-operatives may play an efficacious part in the organization of agricultural credit, commodity marketing and the establishment of rural industries.

Liberalization of Inter-Latin American Trade

The trade integration and liberalization programmes now being launched would afford a good opportunity to expedite the attainment of the objectives sketched out in the various sections of this paper. In addition to basic institutional reforms, Latin American agriculture needs potent incentives to break the vicious circle in which it is developing at present and reach increasingly high aggregate levels of production and productivity. The expansion of markets resulting from the new arrangements and the possibility of much more efficient utilization of resources would create the right combination of circumstances for the achievement of these objectives. Consequently, if the

limitations in respect of agriculture which characterize some of the programmes already under way are perpetuated beyond what might be regarded as a reasonable initial period of readjustment, they might perhaps retard the success of the said programming of economic integration and accelerated agricultural development. One way of mitigating the adverse effects of such provisions would be to adopt measures aimed at the gradual elimination of the real obstacles and at dissipating the apprehensions at present entertained with respect to the agricultural sector's full participation in the integration process. Such measures would primarily involve two basic aspects: (a) formulation of the principles that should be incorporated in a properly co-ordinated agricultural policy for countries on the road to integration; and (b) creation of adequate consultation facilities for the purpose of solving common problems at the regional level and, in general, for the periodic comparison of the measures being applied by the various countries in order to adapt the agricultural sector to the overall requirements of successful integration.

In order to adopt appropriate decisions, the Government taking part in integration programmes would need to initiate a detailed analysis of the differences among their countries in respect of costs, prices, yields, overall productivity, current cultivation techniques, distribution and marketing practices, etc. In certain cases, some crops may be superseded by others as the result of integration. But there would be no reason for doubt as to the beneficial results of such measures, provided that the producers' income levels were satisfactorily maintained during the process, and that the changes took place gradually and on well-ordered lines. Moreover, integration appears to be the only way of eliminating the restrictions which at present burden inter-Latin American trade in agricultural commodities, and which would seem likely to continue in force until farmers become convinced that increased specialization, far from injuring their interests, is one of the most effective means of improving their situation.

KENYA'S AGRICULTURAL DEVELOPMENT PROGRAM

[From "Kenya's Swynnerton Plan,"
Foreign Agriculture; United States Department
of Agriculture, Foreign Agricultural Service,
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These are
excerpts from
the original
article.

A recent \$8.4-million loan from the World Bank will enable Kenya to expand its African agricultural programs for another 3 years. These programs have provided African farmers with land, credit, and know-how since the inception of the first one in 1945.

Largest of the schemes is the Swynnerton Plan to intensify farming in African areas of high potential production, mainly in the Highlands. It was preceded by the Agricultural Land Development Board (Aldev) which, since 1945, has concentrated on land and livestock improvement and water conservation throughout the country. The new World Bank loan and other funds will be used to help Africans establish farms on land in parts of the Highlands that had previously been reserved for Europeans.

The Swynnerton Plan, named for its engineer, Roger Swynnerton, for many years Kenya's Director of Agriculture, aims to improve the general level of Kenyan agriculture to the point where each farm will provide a subsistence plus a minimum of about \$280 a year cash income. This, in turn, is expected to develop a market and free a labor force for Kenya's growing production and service industries.

Introduction of cash crops to new areas is one of the most important facets of the program. African farmers are now growing 40,000 acres of coffee, 4,000 acres of tea, and an increasing number of acres of pyrethrum a year, almost entirely for export. Ten years ago, these crops were grown almost exclusively by

Europeans. They now bring \$28 million a year to Kenya's African farmers and contribute 20 per cent of the country's export income.

The coffee is a high-quality Arabica, grown on a small scale: usually about 1 acre or less for each family. In terms of acreage, African farmers now grow almost as much coffee as Europeans and more than 20 times the 1950 figure. Research, extension, careful cultivation, and the prohibition of land subdivision have resulted in yields of up to 1,200 pounds per acre.

Kenya's 118,000 African coffee producers are served by 138 cooperative societies that run nurseries, manage plants that process coffee to the parchment stage, and handle marketing.

Another 30,000 Africans grow pyrethrum, second of the major cash crops introduced under the Swynnerton Plan. Kenya is by far the world's leading producer and exporter of pyrethrum extract, and African farmers contribute over 25 percent of the 9,600-metric-ton annual production. The total is expected to reach 14,000 tons or more in a few years, with much of the increase coming from African farms.

Tea production tells a similar story. Like the coffee, the tea produced is of high quality. Because tea is an expensive and time-consuming crop to establish, the administrators of the plan thought it would be unprofitable to encourage production of poorer qualities. Tea requires acid soil and frequent mist plus an initial cash investment of about \$340 per acre. In addition, factories must be within a few hours of the fields. Despite these difficulties, 4,000 acres of tea have been planted by Africans since 1957, almost all of it in the Swynnerton Plan areas, and the target is 15,000 acres by 1967. Tea is expected to rival coffee in importance as an African cash crop in a few years.

Subsistence crops, mostly corn and beans, were already established. Under the Swynnerton Plan, production efficiency was increased, so that growers could produce some surplus to sell to the nonfarm community.

Extension and research also got a boost from Swynnerton Plan funds. In 1954, when the program went into effect, Kenya already had a very good extension setup, including a corps of African instructors. But many more agents and instructors were needed and, in 10 years, an extension service two or three times the size of the present one may be needed.

In part, the Swynnerton Plan was developed to meet needs created by Aldev. Aldev started as a soil conservation and grazing control program. It also administered loans for installation of water supplies, grazing management schemes, factories to process farm products, and loans to individual farmers. However, nothing was done in the

areas of land tenure or farm management; these were jobs for the Swynnerton Plan.

In some areas, landholdings had become so fragmented that single farmers owned as many as 20 or 30 scattered plots of land -- totaling between 3 and 10 acres. Under a program of voluntary land consolidation, an effort was made to redistribute the land to give each farmer approximately the same amount and quality as before but in contiguous plots.

Some 1.9 million acres were redistributed in this way, providing land in economical tracts for 275,000 African farm families. However, this was not enough and the Swynnerton Plan extended its work to the Highlands, the area of most of its current operations.

The Highlands occupy less than a third of Kenya's land area, some 71,000 square miles in the southwest. Because of its rich soils, adequate and well-distributed rainfall, and moderate temperatures, this part of Kenya provides nearly all the agricultural production for export, mostly on large European-owned plantations, and contains the majority of the territory's people. Africans have occupied 60,000 square miles of the Highlands area and, until recently, the remainder was reserved for Europeans.

Within the past year, land in the formerly European areas of the Highlands contiguous to existing tribal reserves has been sold to African farmers through a special land settlement board. By 1964, 20,000 families will be settled on this land, most of them on farms of 10 to 25 acres. The estimated cost is \$41.9 million and about 300,000 acres will change hands.

About half the land involved is suitable for mixed farming; the remainder for livestock. Typically, two-thirds of the land on each African farm will be in pasture and the rest divided about evenly between subsistence and cash crops. Along with the land will go credit, technical assistance, and farm training. At the end of the 3 years, the land involved is expected to yield four times the income it did at the outset -- some \$10 million a year, most of it cash income for African farmers.

Half the cost of resettlement will be from Kenyan Government resources, mainly the proceeds of U.K. loans and grants. The rest will come from Colonial Development Corporation loans and grants and loans from the World Bank and U.S. agencies.

In all, some \$26 million a year, three-fourths of the territory's development funds, is allocated by the Kenya Government for agriculture and related services. One-third of this amount is earmarked for the

Swynnerton Plan. While the outlay is high, the government sees it as pump-priming and expects the private sector of the economy to take over as soon as projects become established.

The plans, as a whole, have been successful. Most of the enterprises to which they gave birth have either become self-supporting or been absorbed by the general economy. Through the Swynnerton Plan alone, African purchasing power was tripled in 3 years. If anything, things have grown faster and bigger than expected.

Still, there are many problems to be solved. In Europe an industrial revolution accompanied enclosure, providing a siphon for displaced labor; a similar outlet is needed in Kenya. With land fragmented beyond efficient levels, people went to the cities seeking work. As agriculture is further streamlined in Kenya, more farmers will be in need of other work. The Kenya Government is seeking new industry, both in large cities and in rural areas.

The industrial development accompanying the agricultural development program is just one sign of the far-reaching changes brought to Kenya. These plans have done more than revamp the economy of Kenya's African farmers. In many areas, the very way of looking at life is changing.

Concepts of land ownership replaced those of land use inheritance, and private land tenure replaced communal ownership. Young men returning from World War II to fence off part of their tribes' common land as "theirs" gave a large impetus to this psychological metamorphosis. Along with this concept of land tenure were instilled ideas of trade and money that never existed before.

INTERNATIONAL ASSOCIATION OF
AGRICULTURAL ECONOMISTS

Founded in 1929 as the International Conference of Agricultural Economists, the IAAE has become the world-wide professional organization of men and women concerned with the economics of agriculture. Its objectives are (1) to foster development of the science of agricultural economics in different countries, and (2) to further the application of the results of economic investigation of agricultural processes and agricultural organization in the improvement of economic and social conditions relating to agriculture and rural life.

The IAAE now has a membership of 1,048 members in 63 countries. Its representative character has grown steadily and it now embraces the majority of the countries where the study of agricultural economics is pursued. Members join on an individual basis for a three-year period.

The IAAE holds an international conference of members every three years, and publishes the papers and proceedings. The Tenth International Conference took place at Mysore, India, in 1958 and was concerned with the general subject of agriculture and its terms of trade. The Eleventh Conference, held in Cuernavaca, Mexico, in 1961 focused on the theme of the role of agriculture in economic development. The Proceedings contain numerous papers on the major aspects of the general theme as well as comments of the discussants of each paper. Excerpts from a few of the papers and comments from the Tenth and Eleventh Conferences have been reprinted above.

The Proceedings of the Tenth Conference were published in 1960 by Oxford University Press, which will also publish the Proceedings of the Eleventh Conference. Members of the IAAE are entitled to a free copy of the

Proceedings of the most recent Conference and to copies of the International Journal of Agrarian Affairs. Further information regarding the IAAE may be obtained from Dr. Joseph Ackerman, Secretary-Treasurer of the IAAE, Farm Foundation, 600 South Michigan Avenue, Chicago 5, Illinois, U.S.A.

WORLD AGRICULTURAL ECONOMICS AND
RURAL SOCIOLOGY ABSTRACTS

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STATISTICS AND DEVELOPMENT POLICY DECISIONS

Robert Clower, George Dalton, and A. A. Walters

[One of the necessary conditions for development planning is the availability of statistical data concerning the main aggregates of the economy and its more important sectors. Yet, in many underdeveloped countries, reasonably reliable estimates -- not to mention actual data -- are lacking. Development planning cannot be postponed until comprehensive and detailed statistical series have been prepared. Hence, it is necessary to use a variety of estimation techniques and other "short-cuts" for providing the minimum quantitative basis for planning. Such data can and should be continuously improved and extended in the process of implementing development plans.]

In 1960, in response to a request from the Liberian Government for assistance in developing the statistical series and other quantitative measures necessary for development planning, the Agency for International Development (at that time the International Cooperation Administration) asked Northwestern University to organize and send a Mission to Monrovia for this purpose. The Mission was headed by Professor Robert Clower, Chairman of the Department of Economics at Northwestern University. He and two other senior staff members of the Mission -- Professor A. A. Walters, who holds the Chair of Econometrics and Statistics at the University of Birmingham, and Dr. George Dalton -- summarize in this original article their experiences in helping Liberia's Bureau of Economic Research and Statistics improve statistics for use in development policy decisions.]

This is an original article.

Western economists, who come to do statistical work in an underdeveloped country like Liberia, discover quite quickly that they do not possess any general theory to help them decide which statistics to collect, or, indeed, how to collect them. Particularly if they have

had previous experience in empirical surveys of other underdeveloped areas, however, they soon learn how not to be useless within the constraints set by the local scene.

In this article, we describe the criteria we used to decide which statistics to collect and the ways we collected them. The local limitations and the criteria and techniques we used were closely connected. We then go on to describe the more important statistics we collected and some of the development uses they serve.

Constraints, Criteria, Techniques

Until the end of World War II, the Liberian Government neither conducted any significant research and planning operations nor conceived such activities to be necessary governmental functions. The explanation is straightforward. From the founding of the Republic in 1847, the problem of national survival effectively absorbed all resources over which the government could gain control. At least three factors contributed to this lack of concern with statistical research: one was the lack of domestic revenue to finance even the most basic of governmental services (as recently as 1950, for example, Government of Liberia revenue was only \$3.9 million), and the inability to borrow from abroad. Another was the socio-political -- indeed, physical -- isolation of the settler community from the tribal interior. Without roads, communication facilities, a common language and practices making for national unification, the effective Liberian nation consisted until after World War II of Monrovia and the coastal counties. Finally, there were no technically-equipped Liberians to conduct effective research and planning activities.

Contrary to popular belief, relatively large amounts of reliable economic information are available in Liberia. Indeed, the concentration of Liberian economic activity in a few production lines -- rubber, iron ore, construction, and trade -- and the centralization of political and administrative operations in the Monrovia area, make data collection much less expensive and time-consuming than might be anticipated on the basis of experience in larger and economically more diverse countries. We found, for example, that considerable amounts of useful information were available in the records of concessions and other business firms: data on employment, payrolls, prices, markups, freight charges, external trade, warehousing and transport costs, etc. But nothing had ever been done to establish a regular flow of data from these records into appropriate government departments, much less to organize and analyze such information as had been collected from time to time, or to advise those in authority in its proper use. Thus, for many significant aspects of the economy, what was lacking in Liberia was not information, but organized information; not statistics, but statistical summaries and analyses.

Aside from the lack of local statistical resources -- personnel and usable data series -- a major constraint on our choice of studies was set by our contractual obligation to concern ourselves with information needed for important policy decisions. Above all, our work had to be useful to the Government of Liberia in making decisions of economic significance. This immediately made it necessary to decide which components of the economy were important and which statistical measures could reasonably be fitted to them.

Thus, it was obvious that we had to concentrate our statistical resources in areas where the cost of a mistake in government policy, due to lack of information, would be high. But this criterion could not be an absolute rule since we also had to consider the productivity of our own statistical efforts in terms of the data produced; that is to say, we had to gauge the cost of data collection against its expected productivity as well as produce data useful for important policy purposes. The effort involved in collecting the various types of data had to be taken into account and this cost relationship had to be integrated into the decision-making process.

One's first reaction to a "maximum net benefit" criterion is that it is difficult to apply in practice. And this is true. We cannot make nice cost-benefit calculations of the kind required for perfect observance of the rule. Even the immediate statistical results of a man's endeavor cannot usually be forecast at all precisely; one does not know what the results are going to be until they have been tabulated. Nevertheless, as a conscious guideline, the criterion is useful to remind us of the need to avoid waste: one maximizes where one can. The experienced and efficient economist or economic statistician uses his judgment, his intuition, and his knowledge of outcomes in other fields of applied statistics and perhaps even in other countries. Unconsciously he may in fact employ a mixed bag of guesses, intuitional "feel and smell" and "back of envelope" calculations before committing his resources to even the first stages of statistical inquiries. It is an interaction process which starts with little bits of known fact worked back and forth to make them firm and sensible. Like a good general, the economic statistician continuously surveys his fields to see whether effort should be switched from one job to another.

When we started to collect data in Liberia, our first intuitions were that we should form a matrix of transactions and collect data for household expenditure studies. We discovered in a very short time that our first judgment was quite wrong. Data for these projects were difficult to collect and were not in fact of much interest for formulating government policy. Our resources were thereupon switched to areas where -- now that we had learned some things -- we thought the really big pay-offs were to be had. These were the national income and expenditure accounts, the concessions sector, the government accounts, the

Port of Monrovia, the conditions of labor supply, and road building and transport. As results accrued, it became apparent that we had, indeed, picked some winners -- and these were the first four in the above list. True, some interesting data were also collected for roads, labor supply, small rubber farms, palm oil production, retail and wholesale distribution, etc. But these projects were clearly subsidiary to our main task of shedding light on those areas where crucial decisions were to be made by the Government: i.e., the distribution of income, the future of the concessions, investment in ports and the allocation of government expenditure.

In a word, one does not come to Liberia from England or the United States with an already determined set of all-purpose statistical measures to be applied to local data which one presumes someone else has already collected. Rather, how one decides to work is the result of an interaction process between what one tentatively thinks is important and its initial confrontation with whatever pertinent data one is able to collect. If one is fortunate, the result is to learn quickly what is important and how it can in fact be realistically measured and the statistics made serviceable for development policy. There is a ping-pong effect between what is important in this economy and the measurement of whatever data one can contrive to make relevant.

Three Sets of Statistics

To illustrate the ideas outlined above, we shall describe three sets of statistics we collected and analyzed: the reclassification of government transactions, the data on foreign concessions, and, finally, the national income and expenditure accounts of Liberia. Methodologically, two points of interest deserve emphasis as being pertinent to underdeveloped countries in general. The first is that each of these statistical sets differs sharply from the others. The second is that the national income accounts and the functional classification of government expenditures contain some unorthodox components which reflect the unique structure and performance of Liberia as compared to other countries. A point of interest here is the need to adapt orthodox measures (such as National Income) to the special conditions prevailing. The gradual integration of the data into the aggregate income and expenditure accounts was especially revealing in that it soon pointed up areas where it was important to gather more information, or, indeed, where we could afford to be slipshod.

Economic Classification of Government Expenditures

The accounts of the Government of Liberia are maintained predominantly on a cash basis, not in terms of credits and debits. In this respect its accounts are no different from those of many advanced

countries, such as the United Kingdom. Similarly, no clear distinction is drawn between capital and current items, except that certain transactions of a predominantly capital nature are hived off into a "development" budget. Our main task was to see how much government money was being spent on various services (e.g., education, diplomacy, etc.), and to divide the transactions into current and capital. In the functional classification, the guides provided by UN Economic Commission for Africa publications were most valuable. But the success of the classification depended on the basic data themselves.

The main shortcoming of the government accounts was that, in some cases, expenditures were incorrectly or insufficiently described. An important advantage, however, was that the items were often laid out in elaborate detail and very small expenditures appeared as separate entries. Here we were fortunate in having a Treasury official directly assisting us in inquiring into detailed items. The budget of Liberia is so small that it was possible for one man to know the details of most of the transactions.

One or two surprising statistics emerged. Expenditure on education, both current and capital, amounted to only 10 percent of total government expenditures. This needs to be increased substantially. The "conduct of foreign affairs" was just about equal to expenditure on education. This reflects the high cost to a small underdeveloped country of maintaining diplomatic relations in today's world of many nations.

A more general feature of the accounts, and one that is perhaps typical of developing countries, is the high capital expenditure -- about one-third of total government outlays. Part of this represents the Government of Liberia's equity participation in an iron-ore concession, but an equally important part is for social capital and -- in the hideous jargon of development literature -- infrastructure.

Concession Statistics

One of the astonishing features of Liberian fiscal administration is that the foreign concessions, which are the giants of the economy -- two firms accounted for 40 percent of total government revenue between 1951-1960 -- do not file statistics and reports at a central government regulating agency. This is an important gap in both qualitative (descriptive) and quantitative statistics relating to concession activity. Fortunately, there are relatively few concessions, and they are under legal obligation to provide data to an agency of the Government of Liberia. By interview and written request, and analysis of foreign concession agreements, we collected information about concession investment, employment, wage rates, sales, costs, profits, land areas, tax provisions, welfare and training services, and future plans.

While most firms were willing to supply us with the necessary data, we encountered some difficulties in getting details of costs. Wage costs were always supplied quite readily, but in one or two cases of large concessionaires no other cost data were provided. This is not too surprising since we found that even in its income tax return, the non-wage costs of one of the largest concessions were not itemized; only a lump sum was revealed.

There were a number of policy lessons derived from the concessions study. We shall mention just two. First, the statistics showed that more detailed and careful accounting for tax purposes would yield significantly increased revenues to the Government of Liberia. Second, greater precision in drafting concession agreements was clearly necessary. Loose legal phraseology had a considerable impact on interpretation and the actual operation of concessions. Such stipulations as "accounting procedures shall be those of standard practice" leave unanswered the question of standard practice where -- in Liberia, or in Europe and America?

National Income and Expenditure Accounts

The national income and social accounts of Liberia formed the pivot around which most of our data were collected. They gave us a first idea of the unusual features of the economy and where the levers of policy could be applied most effectively. The accounts also revealed important facts about the distribution of income and the pattern of expenditure in Liberia.

In collecting and portraying national income data it was obviously desirable to change the usual classifications to reveal important aspects of Liberian economic performance. The availability of relatively good statistics for foreign concessions and their predominance in the national economy as employers, investors, exporters, and de facto managers of the largest port in Liberia naturally suggested that we regard concessions as a special sector. This we did with some success. The definitions of the other two sectors -- "government" and "private other than concessions" -- were dictated largely by the data and time available.

The main sources of data were (a) figures which had already been collected but not tabulated or analyzed (e.g., crop survey data, and information on freight charges); (b) tabulated information published by the Government of Liberia (e.g., import and export statistics); (c) special surveys to disclose critical ratios (e.g., we carried out a small-scale inquiry to find the "mark-up" on landed price of imported goods).

We began with excessively ambitious ideas about what we could reasonably expect to measure, but gradually reduced the number of separate income and expenditure categories to the items included in the following illustrative table:

INCOME

1. Wages, salaries and supplements:
 - a. African
 - b. Non-African
2. Net money income of tribal households
(exclusive of money wages)
3. Gross business surplus (including rents):
 - a. Concessions
 - b. Other firms and persons
4. Profits from government enterprises
5. Interest on productive government debt
6. Indirect taxes and fees

EXPENDITURE

7. Current goods and services:
 - a. Households in money economy
 - b. Tribal households
 - c. Government
8. Gross domestic fixed capital formation:
 - a. Concessions
 - b. Other business concerns and households
 - c. Government
9. Net increase in inventories
10. Exports of goods and services, minus imports (f.a.s.)

Our estimate of gross domestic money income at market prices was then obtained by summing items 1-6, of gross domestic money expenditure by summing items 7-10.

The procedures used to estimate the major components of income and expenditure were extremely varied and in some cases indirect and piecemeal. Only a partial summary can be given here; anything more would require a detailed account of unique features of the Liberian economy and its very uneven statistical sources.

Every effort was made to cross-check estimates arrived at by one route with estimates based on data from complementary or substitute sources. Fortunately, having some very precise data on iron ore and rubber output helped us reduce errors on some income components for which there were no direct data. Our final estimate of African wages, salaries and supplements represented a compromise among three separate measures, each based on partial information from concessions, other business firms, and government. The estimate of current expenditure on goods and services was a composite figure derived from two separate measures, one based mainly on import statistics (which may be regarded as Liberia's "census of manufactures"), the other based largely on income tax data indicating cost of goods sold.

Similarly, the estimate of gross domestic fixed capital formation, based initially on direct information from foreign concessions, other firms, and government, was later checked by an independent estimate based on imports of capital goods and their components plus labor input, and then checked again by yet another estimate via income tax records, information on inventory change, and data on construction activity.

We cannot claim that the figures finally arrived at were as reliable as those for developed economies. We do claim, however, that they were sufficiently reliable for practical policy-making, and that they were the best that could be prepared without undue concentration of effort in too few areas.

The most important weakness in the national income accounts was the lack of direct data on the operations of private non-concession firms. Fortunately, most of the sales of these firms were covered in government and concessions accounts, and were reported in income tax returns for several recent years. A survey of selected businesses was initiated to fill remaining gaps.

The single most noteworthy feature of the aggregate income estimates was the very small fraction of income (less than 25 percent) disbursed to African wage earners. (We are now realizing that even this estimate was somewhat overgenerous.) Although the tribal sector comprised more than two-thirds of the population, it received only about one-quarter of gross income (both in money and kind). At the other end of the scale, concessions accounted for about 40 percent of total government revenue, employed less than 40 percent of the wage and salary

labor force, but accounted for 65 percent of gross profits, and more than 35 percent of national income.

On the expenditure side, the most revealing statistic was the high level of fixed capital formation; it was about \$50 million in 1960. This represented more than 35 percent of the gross national product at market prices, a higher proportion than that reported for any country in the United Nations Statistical Yearbook for 1960. Nor was 1960 a particularly unusual year in this respect; provisional estimates for earlier years indicated that for some time Liberia has been among the fastest growing economies in the world. Our preliminary data for 1961 suggested that the rate of expansion is still rising.

The policy implications of these and related findings are numerous. Liberia's "open door" policy towards foreign investors has been extremely effective in initiating some lines of development, and especially in production for export. But it has created an economic structure which makes Liberia peculiarly vulnerable to fluctuations in business activity abroad and strains Liberia's labor resources. Important government decisions regarding monetary policy, economic planning, education and training must allow for these factors. The national accounts provide an indispensable factual basis for intelligent action: without these accounts government policy in such a rapidly growing economy could not possibly avoid serious mistakes.

Lessons Learned

After this cursory survey of some of the problems of collecting and interpreting economic data in Liberia, we can summarize the main lessons we learned. The first is that one requires a theory which tells one what statistics to collect. The criterion we used was rough and crude, but we are sure that it made us much more efficient. Second, the work taught us that the relatively abundant data collected, sometimes rather wastefully, by government agencies could nearly all be used to shed light on problems of economic policy if it were carefully corrected, analyzed, and pieced together with data collected elsewhere. The figures required a lot of processing and great care had to be exercised in interpretation; consistency tests were never more important. But even bad figures could be used -- especially if we had some idea of how bad -- and they were usually better than none.

Third, the training of Liberians to carry on our work and to provide a nucleus of staff for a future planning agency were clearly important needs we should have helped to meet. We have not been successful at this job, partly because the day-to-day research in which we were engaged was exceedingly time-consuming and left very little time for training. In some measure also, our failure is attributable to the

absence of suitably educated Liberians who were free to undertake these tasks. All the competent Liberian officials we encountered had volumes of administrative work which could not be postponed. The only personnel available for training were those with no more than a high school education and an imperfect knowledge of English and arithmetic. Attempting to train them in national income accounting would have required so much time as to necessitate a substantial reduction in our survey and analytical work.

In conclusion, it is most important to stress that economic research in underdeveloped areas requires people trained in statistical theory and economic statistics as well as economic theory. They must relate facts and theories, and make judgments of what is and what is not important. These skills come with experience, with handling data, analyzing facts, and using theories. Unfortunately, the teaching of the social sciences has not developed far along these lines: too often we polarize to the aridity of pure theory or to the casual description of institutions. But if the social sciences are to be useful in practical planning in underdeveloped countries, we must rub our theorists' noses in the facts. In Liberia, as in other underdeveloped countries, economists must learn to quantify usefully, even where statistical sources are bad, and to use their tools of analysis with imagination and vigor.

GUIDELINES FOR PUBLIC ENTERPRISES

John Kenneth Galbraith

[From "Professor Galbraith Stresses Need For Bigger Surpluses From State Concerns," Capital; Calcutta, Vol. CXXXV, No. 3640, 22nd December, 1960, pp. 901-903.]

[In 1959, when he was still Professor of Economics at Harvard University, Ambassador John Kenneth Galbraith visited India and prepared two notes at the request of the Indian Planning Commission. The first dealt with foreign resources for the third development plan, then in process of preparation. The second was concerned primarily with the policies and operations of the various types of public enterprises in India. Ambassador Galbraith's second note, though written three years ago, is by no means out of date. Portions of it relevant to the problems of public enterprises not only in India but in all countries -- developed and underdeveloped, capitalist or socialist -- are reprinted here.]

These are
excerpts from
the article.

The problem of earnings and investment in the public sector is especially urgent. Until now, the most difficult problem in Indian planning has been where to get resources for investment. Everything turns, or seems to turn, on what can be mobilised in taxes and voluntary savings at home and what can be obtained in loans and grants from abroad.

Obviously, a prime aim of India must be to plan its way out of reliance on such uncertain and exiguous

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sources of domestic savings. (Foreign resources present a somewhat different problem.) To give people income and then remove it by taxation, inflation, or appeals to thrift is an inefficient and self-limiting procedure. In both the capitalist and the communist countries, investment is in very large measure from the earnings of the industrial enterprises. These accumulate a surplus which becomes available either for their own expansion or elsewhere. The enterprise thus assumes responsibility for both the technical side of its own growth and improvement and also for getting the requisite resources.

Something very like this must happen in India, as all Indian economists recognise. Industrial plants must take on their full job, which is to be efficient producers and to accumulate the surpluses which will provide for future expansion. It is very important that these surpluses be immediately identified with such further expansion. Otherwise they may become the target of workers in the industry who can easily be persuaded that they have a privileged claim on them, and consumers may also insist on low prices as in the recent case of rail passenger travel. The result will be small surplus (or none) and hence no resources from this source. That I have called post office socialism -- public ownership that contents itself with avoidance of loss or a modest profit which it returns to the treasury -- will inevitably prove a stagnant form of economic organisation.

I now come to another and somewhat related point. The proper organisation of the great establishments is not the only problem of the public sector. There is also the task of generating effort and enthusiasm in small activities -- those of the villages, extension blocks, cities and perhaps also the States. The need for this is well recognised and is, indeed, one of the recurring themes in Indian discussion. The best planning provides people with an opportunity for doing what is beyond the mind and even the imagination of the planners.

But the things that arise here in the public sector -- expanding local control over local public finances, the sponsorship and development of local industries, the organisation of volunteer labour effort, of co-operatives, the provision for a period of rural service by university graduates -- have little relation to the problems of organising steel production or fertiliser manufacturing. They require a different organisation and, to a considerable extent, they call for a different type of mind. This type of public activity and enterprise will be blighted if it is too closely identified with ordinary large-scale industrial development.

We may think, indeed, not of one public sector but three. One sector is concerned with bringing totally new industries into existence. This has been the important sector so far -- it has been creating such industries as electrical generation, fertilisers, iron and steel. The

second sector, an outgrowth of the above, is concerned with the operation, expansion and regeneration of the existing industries and with providing capital for the establishment of new industries. Finally, there is the wholly different sector which seeks to develop local responsibility and the release of local energies. By way of making this more explicit, let me suggest in summary form, without extensive argument, what each sector involves. I hope this will not be taken as any sort of final suggestion but rather as a basis for discussion.

(1) The three parts of the public sector may be denoted as follows: sector A -- initiation; sector B -- operation, expansion and financing; and sector C -- spontaneous development.

(2) The initiation sector will be concerned with the launching of entirely new industries. This, as in the past, will be a ministerial function. However, this does not preclude the granting of more autonomy of effort than at present to companies developing new industries. And existing public firms should often be called upon to foster and develop new ones. Still, initiation is a distinct function. It calls for decision as to what and where, and in the early stages of creation of an industry, considerations of efficiency and earnings are not vital. It is getting things started which counts. This stage of initiation has principally characterised the industrial public sector in India up to this time. However, a new phase is rapidly approaching.

(3) The operation, expansion and financing sector embraces those industries which are now fairly well launched. While in the initiation sector, a considerable measure of ministerial initiative and supervision may be necessary, in the operation, expansion and financing sector, ministerial supervision and intervention must shrink to a minimum. Civil service decision-making is inevitably and properly slow and deliberate and demanding in quality. Operating decisions must be prompt and they need not always be right, for most such decisions are reversible. So ministries have as their principal function selection of good managers supported by competent (though not powerful) boards and the provision of firm but workable rules by which the public enterprises shall live, covering, in particular, recruitment and labour relations, accounting and financial procedures and procurement policies. While the rules should effectively exclude dishonesty and favouritism, it should be remembered that excessive precautions can be very costly. Rules should be enforced not by advance clearance but by post-audit. Ministries must hold the companies responsible for results. To this end, officials should never be members of the boards. If they are, the autonomy of the enterprise will almost certainly be lost as the board becomes a link in the civil service hierarchy. Parliamentarians must have clearly in mind that when they question individual decisions of companies, they force ministries to protect themselves by asking for advance knowledge and approval of all decisions. This destroys the

autonomy and hence the effectiveness of the public enterprise. And again, it must be stressed, the public enterprise must be free even to make mistakes, for these are inevitable in efficiently rapid decision-making.

(4) The success of the operation, expansion and financing sector will be measured broadly by the efficiency of its operations -- its ability to organise ample production at low cost and to sell at remunerative prices. (Control of prices is a separate chapter. To the largest possible extent, they should also be under the control of the enterprise. Then prices will not be an excuse for low earnings. This decentralisation of price-making has been a major accomplishment of recent Yugoslav experience. However, there will be cases, electricity and doubtless steel are examples, where central or group price setting is inescapable.) This means that there will be earnings -- profits -- and these are the most important test of the effectiveness of public enterprise. (As a measure of performance, Russia attaches about the same importance to profits as the U.S.A.) Production is not the only task. The existing concern is also the logical agency to undertake expansion in its own line and even to bring into existence related industries. When it is efficiently organised for operation, it will usually be efficiently organised for expansion. In any case, it will be more effective for this than a wholly new, inexperienced and untested organisation.

(5) Expansion and operation in this sector should be tied together by the financing function. When a firm is given an expansion target, it should be asked to prepare a plan for financing it. This plan would have the first claim on earnings. It would come to the Government only for what would not be supplied from earnings. If the expansion schedule does not absorb all the planned earnings, these should be used to repay capital and thus become available for investment in other industries. A public development bank is a logical part of this sector.

(6) These accounting procedures, which incidentally are also broadly common to capitalist and socialist countries, have the great virtue of keeping the essential character of the enterprises and their tasks in the public view. Thus if the enterprise is obliged to use its earnings for the planned expansion rather than return them to the Treasury, their use for development will be clear to workers and consumers. They will be less likely to assert a privileged claim on the assumption that they are profits in the old sense. It will be seen that excessive wage or salary claims or indeed any waste -- is at cost to the nation's development.

(7) Time does not allow me to comment on the spontaneous development sector which I think has great possibilities. Development is not confined to the great industrial enterprise. As a growing body of

opinion in India clearly realises, much must be done -- always speaking of the public sector -- in releasing the energies and efforts of local bodies and organisations. Community development is an important beginning, but I hazard the guess that opportunities here have scarcely been touched.

(8) These are hurried comments. As I have observed, they are intended more to provoke discussion, not answer questions. I have assumed that India has made a firm decision in favour of a public sector. But this decision is the beginning, not the end, of the discussion. In the old days, the principal enemy of public enterprise was, no doubt, those who disapproved of socialism. Now it is socialists themselves. For it is socialists who refuse to consider seriously the peculiar requirements of the modern productive enterprise, whether public or private; who decline to give it the autonomy it must have; who destroy it by meticulously passing on its decisions and thus forcing upon it an intolerable and unworkable centralisation; who decline to see that the organisation of public enterprises must keep pace with new conditions and new tasks; who are careless about the standards to which management of the enterprises must be held; and who, on occasion, encourage workers and consumers to appropriate the surplus on which expansion and growth depend and without which there will be stagnation. Above all, it is socialists who are responsible for the paralysing belief that success is a matter of faith, not work.

In many parts of the world, including India, there is in fact no real alternative to extensive public enterprise. And while public enterprise is often successful, the record is highly uneven. It is sufficiently imperfect so that no one concerned with the success of economic development can take it for granted.

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A PROGRAM FOR VOCATIONAL TRAINING
IN PEASANT AREAS

[From "Vocational Training and the Establishment of Service Workshops in a Poor Rural Area: The Experience of the Andean Indian Programme," International Labour Review; International Labour Office, Geneva, Vol. LXXXV, No. 2, February 1962, pp. 129-147.]

[In 1954, the governments of Bolivia, Colombia, Ecuador, and Peru started the Andean Indian Programme with the cooperation of several United Nations specialized agencies, including the ILO, FAO, WHO and UNESCO. This is a comprehensive program to increase the productivity, living standards and health of the Indian peasant population of the mountain areas. The Andean Indian Programme is described in the International Labour Review, Vol. LXXXIV, No. 6, December 1961, pp. 423-461. As part of this continuing effort, the ILO undertook to help organize a program to provide training in modern mechanical and other skills in the rural areas. The results of this program to date are described in this report, excerpts from which are reprinted here.]

These are
excerpts from
the article.

One of the problems which arise while industrialisation is going on is that of absorbing the large numbers of workers who come from rural districts where there are inadequate educational facilities into industrial employment. Apart from the measures taken in the towns and in industry itself to give workers from the countryside a chance of acquiring new skills, knowledge and habits, it is also advisable to try to include vocational training schemes suited to the needs of the people and the facilities available in the country in any development programme catering for rural populations.

This was the line taken in planning the Andean Indian Programme. It was considered from the start that vocational training was one of the most effective means by which educational and economic standards among the Indians could be raised. The reason is that vocational training in a primitive environment can help to "kill two birds with one stone." Teaching people how to work with materials like wood and iron has an educational value in that it raises the trainees' general standard of knowledge; in addition, it has an economic value in that they learn from it how they can improve their everyday living conditions (e.g. their homes, household utensils, their tools, etc.). The training courses, apart from their intrinsic educational usefulness, equip individuals for gainful employment, either as handicraft workers in their villages of origin or in nearby communities or, alternatively -- should they decide to settle down in industry or the cities -- as wage earners in industrial and agricultural concerns in the region or in distant industrial centres.

Approach and Working Methods

The first step was to study the needs and potentialities of the Indian villagers -- which vary according to the level of education of individuals and the social structure, technical development and economic habits of the communities in which they live. Another aspect was the demand for skilled and semi-skilled labour in the neighbourhood and in more distant towns, or that which could be expected to arise as a result of national or regional development plans. The choice of the methods to be used was another problem. For this purpose it was assumed that the Indian communities could be divided into three types: agricultural without mechanisation, agricultural with mechanisation and incipient handicraft industries, and rural with prospects of development for small-scale industries; that the training would have to be given to young people and adults who would, as a rule, have had only a short spell of primary education followed by a fairly long period without any instruction at all; and that the length of the courses would have to be adapted to the habits and leisure time of the Indian villagers, whose working days and seasons are dictated by the extreme rusticity and poverty of their way of life.

In view of these features and the two aims mentioned earlier -- elementary vocational training to improve local living and working conditions and instruction in typical jobs belonging to the basic trades -- two approaches towards the training of the Indians were adopted in the Andean Indian Programme. One of them, which was centralised, involved holding courses for young people and adults in quite highly mechanised workshops set up for the purpose at each action base. The other -- the decentralised approach -- consisted of encouraging the opening of rural, communal, or handicraft workshops at various points in the area covered

by each action base, reliance being placed on the efforts of the Indians themselves, with help from the base, and especially from the vocational training department at the central workshop.

A typical central workshop consists of a carpentry section and a networking section, each of them catering for between 10 and 15 trainees. The latter section is organised to give training to locksmiths, tinsmiths, blacksmiths, welders and vehicle and motor mechanics (who are also trained to repair electrical installations). The syllabus in each workshop is designed to achieve the following objectives: to give basic vocational training to young people and adults so that they can set up as handicraft workers in the area or find jobs in mining or industry; and to facilitate the extension of elementary vocational training in the Indian villages by, for example, providing training for demonstrators or instructors in the village workshops and acting as a place where all the vocational training staff in the sphere of influence of the base can meet from time to time.

Initially the I.L.O., at the Governments' request, selected two international instructors with special experience in the teaching of trades involving carpentry and metalworking for each of the central workshops. Subsequently a co-ordinator's post was established and a vocational training expert appointed to it. These experts, together with those sent by other international organisations to give advice in their respective fields (fundamental education, health, agriculture) work in direct collaboration with the head of each action base. The members of each of the technical teams help to execute the base's general programme while at the same time training their national counterparts.

The initial aim was to establish [decentralized] workshops in the Indian villages that wanted them and were prepared to assume certain obligations in order to keep them operating. Each workshop would have to be built in the main by the village itself, although aid would be forthcoming from the base in equipping, organising and starting it. It would consist of a number of sections, e.g. a carpenters' shop, smithy, weaving shop and dressmaking section, with nothing but manually operated equipment. The amount and variety of tools and equipment required would depend on the village's own needs and resources as well as on the physical or financial resources of the base itself. To begin with, the workshop would be supervised by a committee made up of members of the village or, alternatively, would be placed under the control of the most appropriate village authority or institution, which in turn would appoint a manager. This committee or manager would receive technical aid from the vocational training instructors at the central workshop at the base; by slow degrees, the village would take over the running of the workshop until it was fully responsible for its management and future development.

In these workshops the members of the village would be given an introduction to a trade, either continuously from demonstrators who had previously been trained at the central workshop (future demonstrators would be chosen by their villages, which would contribute to their maintenance during their initial training at the central workshop), or intermittently by national instructors from the central base workshop attached for short spells to the village workshops.

This introduction to a trade would be given whenever the adult members of the village proposed to undertake some task of particular value to themselves or to the community. When appropriate, the village could allow the workshop to be used to give pre-vocational training to the schoolchildren. As can be seen, the village workshop under this scheme was designed to serve not only as an educational extension unit but also as a device for supplying the peasants with the tools and methods they needed to manufacture articles of everyday use.

Under the scheme the workshops could develop in one of two ways. In some cases they would become village property and remain available to all members of the community, while in others they would be run privately by a single villager or by a number banded together to form a handicraft society, the rent payable to the community by the new owners being fixed by agreement.

The Method Used to Establish Village Workshops

During the first stage the establishment of workshops in villages was the responsibility of the vocational training group at each action base. Contact was made with the leaders of each of the Indian communities in turn, to explain to them the advantages of having a workshop at the disposal of all the villagers and to find out whether they would be willing to take the initiative in opening such workshops with assistance from the base. In every case they were in favour. Nevertheless, although their interest was genuine it was clear from the start that the base would have to give a substantial amount of help in building the premises, supplying the tools and drawing up the rules of operation for each workshop.

The building of the workshops inevitably took some time; and, in order to take advantage of the enthusiasm displayed by some villages, temporary workshops were in some cases opened in houses lent by individual Indians, which were fairly suitable for the purpose but usually needed patching up.

Once a [village] workshop was in operation, the aid it received from the [central] base usually took the following forms:

- (a) the training of instructors;
- (b) visits to give advice on working or administrative methods;
- (c) co-operation in tasks too big to be carried out with the limited resources of the village workshops;
- (d) the loan of additional tools;
- (e) advice on the design and preparation of new products.

The principal form in which aid was provided was that of training for future demonstrators at the central base workshops. These training courses varied in length depending on circumstances and the money available.

Periodical visits by the central workshop instructors (an essential part of the training process) helped to maintain a check on the operation of each workshop, and the demonstrators were given any technical advice they needed to cope with the work in hand (e.g. how to plan it properly, make drawings where necessary, calculate the amounts of raw material needed, design and execute the work and handle various aspects of administration and bookkeeping).

When a workshop has to tackle some unusually difficult task, the visiting instructor does all or part of it himself and takes advantage of the opportunity to carry the training of the demonstrator and the villagers concerned one stage further. Whenever the job cannot be done in the workshop owing to the lack of some essential tool or piece of equipment, the instructor looks into the matter and submits a report to the head of the base. If the latter, after considering the cost, the time limits involved and various technical factors, concludes that the proposal is worthwhile (even if not always in financial terms) the job is carried out by the central workshop. On the other hand, if the difficulty can be overcome by lending the village some easily transportable tool or piece of equipment, this is done whenever possible, so that the work is actually performed by the people who will benefit from it.

Another form of co-operation has been the manufacture of utensils, equipment or tools which are easy to produce and therefore very useful in a rural environment. The central workshops produce one or more prototypes, adapting the manufacturing process to the tools available in the workshops, supplies of raw materials and the standard of skill among the demonstrators and workers. Once the design stage is past, a proposal is made to the nearest workshops that they should make the new product, and a trial is made by those that are willing to do so. It is always best to begin with the nearest workshops, as this makes it easier to deal with any initial defects discovered during the experimental stage. A specification is then drawn up giving a description of the manufacturing process so as to make the details as widely available as possible.

Development of the Village Workshop into a Handicraft Workshop

The first workshops adopted rules of administration which made them communal undertakings open to all the inhabitants of the village and operated by a committee or manager elected by them.

For each section of the village workshop -- the carpentry room, the metalworking room, the weaving room or the dressmaking room -- a demonstrator is appointed either for an indefinite period or for a renewable period of one year with responsibility for the technical side of the work being done in his particular room. Any member of the village may make things in the workshop for himself or, alternatively, can band together with other villagers to do something on behalf of the community. The demonstrator is responsible for advising them and for teaching them any operations they are unfamiliar with. The appropriate authority fixes the fees to be paid by the users, the money being spent on replacing or mending the tools and buying new ones. The demonstrators are usually paid, not in cash, but through an exchange of services.

On a number of occasions, however, difficulties have arisen. For instance, rooms may be monopolised by persons who want to do jobs for which they are being paid; some committees neglect their duties, so that the workshop's future depends on the keenness of the base staff; instructors sometimes lose all hope of receiving any pay or incentive from the village and leave; and, lastly, the initial interest shown by the villagers sometimes slackens as a result of difficulties caused by local circumstances or the fact that the base is unable to give all the necessary aid at the right time.

While it is certain that the Indian peasant initially welcomes the idea of a village workshop which places a whole set of tools at his disposal, he is bound to be disappointed once he finds that the tools are only sufficient to allow two people to work at the same time and that the ones he wanted are being used by somebody else. Similarly, it is quite understandable that the demonstrator should lose heart when, after taking the course at the central workshop and spending some time teaching his neighbours various working techniques, he finds that the village does not reward him adequately for his services. Moreover, once he has acquired the skills needed to perform certain jobs he naturally feels tempted by the idea of earning his living in this way and prefers to do outside jobs instead of spending his time giving instruction which is only partly understood by the other villagers.

A workshop linked with a farm co-operative would appear to have some advantages over a village workshop in that a co-operative is a more durable institution than a committee set up specially to administer a workshop. However, there seems to be no answer to the problem of

paying the demonstrator adequately. As the co-operative is a village enterprise, the demonstrator is automatically tied to the village -- which does not always make economic sense because usually the demand in a single village is not sufficient to keep him fully occupied. Although distances between villages in the area are not great, an effort has been made to open a workshop in each of them. This policy is a sensible one if the village workshops are predominantly social and educational in purpose, but it is not the way to make them economically self-supporting.

Handicraft societies were founded in an attempt to give a stake in the workshops not so much to all the members of the village or co-operative but to the members most likely to give them their support. Here, of course, the economic aspect was given greater emphasis than in the other cases. But, unfortunately, earnings were barely sufficient to pay the demonstrator, and nothing was left over to share out among the members in the form of profits -- as a result of which many of them lost interest.

In view of the difficulties of operating workshops organised along the lines just described, new workshops were opened in the more prosperous and advanced villages by demonstrators who were dissatisfied with the state of affairs or former trainees from the central workshops who were anxious to set up in business on their own account as handicraft workers.

These examples of individual initiative were backed up by the action bases on the ground that they were a step in the right direction and were perhaps better suited to social and economic conditions in some villages than the original workshops. Each base, as far as possible, supplied the handicraft workers with much the same services as those provided to the villages when the first communal workshops were set up. The vocational training departments at the bases have established close and effective working relations with them, probably because, being independent and determined to make good, they fully realise that success depends on the quality of their own work and are aware from personal experience of the ample opportunities for further training afforded by the bases.

The handicraft workshops are operated in the usual way: the workers decide for themselves what to charge their customers, although in doing so they have to allow for the generally low level of incomes.

These workshops were the last to be established. In a sense, therefore, they are the outcome of the slow development of the village workshops from the communal form to the stage of individual operation. While there can be no doubt that the latter type are more prosperous than the former in the advanced villages, this does not alter the fact

that the only practicable way of introducing tools and methods of working materials such as wood and iron in the other villages is through the communal workshop with strong support from the base.

Conclusion

The experience gained shows that in a poor rural environment vocational training must be planned with an eye to two things -- education and economic success -- and must be based on a central workshop which, in addition to acting as a training institution, gives technical support to schemes in the villages within a certain radius.

Establishing and running the central workshop raises problems of construction, equipment and staffing, but these can readily be overcome when sufficient money is available. The methods used by the Andean Indian Programme for the initial, further and special training of instructors have proved their worth.

If the decentralised approach is to be effective, three conditions must be fulfilled: interest must be shown by the Indian villagers; there must be suitable facilities (a village or handicraft workshop with appropriate equipment); and there must be a technically qualified person to act as a link with the central workshop. To keep a village workshop running, a full-time demonstrator is needed -- and he must be paid. The difficulty is not so acute when a handicraft worker takes over the workshop, but even then it is necessary to have a technically qualified person to act as a link with the central workshop.

The communally run village workshop appears to be suited to the culturally less advanced communities where the traditional collectivist relationships and institutions survive, internal cohesion is still great and there is a subsistence economy without occupational specialization of any kind. On the other hand, the handicraft workshop is a natural choice for the more advanced villages where, side by side with forms of subsistence economy, there are methods of production based on occupational specialisation and cash exchange -- as is common in the case of non-traditional handicraft trades such as carpentry and metalworking.

From the economic standpoint, vocational training is no more than an instrument and it only becomes fully effective when the economic development of an area puts more money into the hands of its people, thus enabling them to satisfy new needs. However, even though only an instrument, vocational training can help to raise the incomes of the inhabitants of a rural area, provided it is dovetailed into the general development programme, particularly the part of it dealing with agriculture. One example of the way it could help would be by teaching techniques for making better farm implements.

Lastly, it must be pointed out that final success does not depend entirely on the skill and energy with which vocational training is carried out or handicrafts are encouraged. It depends largely upon the raising of living standards among the rural population, and this can only be done through greater efficiency in farming, on which their economy is based.

COMMUNICATING INDUSTRIAL IDEAS: AN INTERNATIONAL
HANDBOOK FOR INDUSTRIAL EXTENSION

Jean Marie Ackermann

[International Development Center, Menlo Park,
California, Stanford Research Institute, 1962,
xvii and 145 pp.]

Though designed for industrial development extension agents, this little handbook will benefit anyone who must communicate new ideas and ways of doing things in underdeveloped countries. It draws upon the extensive work done during the past twenty years in the United States on the principles and techniques of communicating new concepts and skills at all levels of industrial activity. However, it is written with a keen awareness of the importance of cultural differences in communication. Approaches which have proved successful in the United States are not mechanically applied to Asian, African or Latin American situations; but, with rare perceptiveness, are adapted in the light of the different attitudes and meanings that exist in these other cultures.

The handbook explains in a simple and interesting fashion the nature of communicating technological changes; the role of the industrial extension agent; techniques of encouraging attitudes conducive to development; and practical ways in which to conduct meetings, large and small, to use audio-visual aids, and to obtain, prepare and distribute publications of various kinds. A final section draws the lessons to be learned from a number of case histories, and additional illustrative material and a selected bibliography are presented in appendices.

EMPLOYMENT OBJECTIVES IN ECONOMIC DEVELOPMENT:
REPORT OF A MEETING OF EXPERTS

[International Labour Office, Studies
and Reports, New Series, No. 62,
Geneva, 1961, xi and 255 pp.]

[Persistent -- and in many cases growing -- unemployment and underemployment are among the major economic and social problems confronting the underdeveloped countries. Adequate attention to employment objectives becomes more and more necessary in development planning. Recognizing the need for insights and ideas on this problem, the International Labour Office of the United Nations formed a group of experts, who held two series of working sessions in Geneva during 1960. Chairman of the meetings was the well-known Brazilian economist, Dr. Roberto de Oliveira Campos, now Ambassador to the United States. The other members were Professor Benjamin H. Higgins (Canadian), Chairman of the Department of Economics at the University of Texas; Mr. Veniero Ajmone Marsan (Italian) of the Research Department of the Istituto per la Ricostruzione Industriale and Economic Adviser to SVIMEZ; Professor Josef Pajestka (Polish) of the University of Warsaw and Director of the Economic Research Centre of the Planning Commission of the Council of Ministers; and Professor Kakkadan Nandarath Raj (Indian) of the University of Delhi and Member of the Panel of Economists, Planning Commission of the Government of India.

On the basis of their discussions, the group prepared and adopted a detailed report covering the nature of the employment problem in underdeveloped countries; the relationship between capital investment and employment; fuller utilization of underemployed labor; raising the productivity of existing scarce resources; labor mobility, regional planning, and training; and the international aspects of creating new employment opportunities. Appendices contain a series of case studies of employment problems

and policies in Brazil, Ghana, India, Italy, Japan, the Philippines, Poland, Egypt, Ceylon, Greece and Pakistan, and a technical paper on output, capital and labor with different techniques of production.

Prior to the publication of the report, a summary of it was published in the International Labour Review, International Labour Office, Geneva, Vol. LXXXIV, No. 5, November 1961, pp. 394-411. The main portions of this summary are reprinted below.]

In a number of newly developing countries a regular, full-time job has come to be considered a great privilege. Because of high birth rates the populations of these countries are young and are growing fast; every year the number of persons reaching working age is much larger than it was the year before. But it is far from certain that economic development will create adequate employment opportunities for the growing labour force. Modern production techniques being what they are, it is quite possible for output in manufacturing industries to double within, say, ten years with very little need for extra manpower, as new machinery is installed in the growing industries and as managers learn ways of utilising their labour force more effectively. Economic development may be successful, even very successful, in raising output but not in increasing employment, thus leaving a major social problem unsolved.

It is now widely accepted that economic development cannot be relied upon to come about spontaneously but requires enterprise, initiative, capital, hard work and appropriate government policies. In addition, when a high level of employment is desired, further deliberate measures are likely to be needed, within the framework of policies for development, in order to achieve this specific objective. A country may develop its economy along many paths, but not all of these lead also to high employment. Governments, private enterprise, and labour and other organizations all have to play their part in the special efforts needed for high employment, in different ways and proportions, which each country has to determine for itself.

The experts found that in many programmes for economic development rather little attention has been paid to the need for increasing employment, which has been looked on as a by-product of general economic development. To some extent this is, of course, justified; development will normally create some employment -- but this may not be nearly enough. One of the experts' principal recommendations is, therefore, that much more emphasis should be given to the provision of jobs as a separate policy objective. The fact that many development programmes are not very explicit or ambitious as regards employment objectives cannot, of course, be ascribed simply to oversight or lack of pressure. At least part of the explanation is to be found in the fear lest strong

emphasis on employment objectives should in one way or another hamper economic progress, e.g. rising production or diversification of the economy. On this important point, the experts, while recognizing the possibility of conflict, accepted as a basic premise "that there are opportunities for exploiting more energetically the possibilities of a mutually reinforcing increase of both employment and the rate of economic growth" and that "as a rule, the employment of more labour will increase total output." Thus, in effect, the experts accepted the notion that, if properly used, abundant labour may be regarded as an asset rather than as a liability, in the sense that it presents opportunities for increased production which countries without abundant labour do not have.

The experts' analysis of the nature of the problem confirms the belief that lack of employment opportunities is due largely to capital shortage. In their view policies for proper utilization of labour must therefore centre mainly on ways of increasing investment and of making the best use of such capital as countries have or can obtain.

The first requirement is to raise the level of investment. As employment opportunities increase, the living standards of those who would otherwise have remained unemployed or underemployed will rise and there will be an urgent need for larger supplies of food and other necessities. But, since there are limits to the extent to which both investment and consumption can be increased simultaneously, measures are needed to restrain higher consumption by the more well-to-do among those who already have jobs or other means of existence.

Secondly, while in newly industrialising countries it may be advisable to invest in some highly advanced capital-intensive plant and equipment, the experts consider it desirable to invest some capital also in projects calling for more labour than would be appropriate if there were no unemployment or underemployment.

Even without considerable new investment there are ways of increasing employment, and in some cases labour itself can be used to create capital. Arable land can be cultivated more intensively and existing plant and equipment used more fully. Unemployed and underemployed workers can construct roads and dams, using very little equipment. These and other ways of utilising surplus labour in both rural and urban areas were examined, as were the possibilities of increasing the productivity of existing activities (including large and small-scale industries and agriculture) so that more can be produced, and more invested for development and increasing employment, without restricting consumption.

Another problem of employment-creation is the balance of payments. Both equipment and, to a varying extent, the food and other consumer

goods needed for a fast-growing working population must often be imported, and a country's ability to acquire them depends on foreign exchange. The availability of foreign exchange is determined by export earnings and by the loans and grants obtained from other nations. Many industrialising countries have experienced serious difficulties in these matters. Their exports of primary products have fetched strongly fluctuating (and recently falling) prices, and the goods manufactured by newly industrialising countries have in some cases encountered resistance in the developed nations, which see in them a threat to their own employment position; the international flow of public and private funds, though rising, has been inadequate and unevenly distributed.

The experts believe that expanding employment is compatible with economic growth, that the two can reinforce each other, and that an increase of employment is an urgent need in itself. They recognise that a conflict may arise between more employment and more rapid economic growth; but this is not the general rule, and where it does arise, it can often be eased or overcome by appropriate measures.

They consider in some detail the main elements of a policy for a mutually reinforcing increase of both employment and the rate of economic growth. Briefly these elements are as follows:

Raising Investment

The higher the level of investment, the easier it is to provide capital for more workers without hampering the increase of capital per worker that will promote higher productivity of labour. How much investment a particular country needs in order to achieve full employment depends, among other things, on the volume of existing unemployment and underemployment and on the future growth of the labour force. Many countries have plans or targets for public and private investment in order to raise production in various sectors. Yet, where expanding employment is accepted as a major objective, it will be very useful to examine the employment contents of investment projects more carefully. For this purpose a great deal of new technical information is needed concerning the number of jobs created by a unit of capital (the so-called "capital-labour ratio") invested in different specific types of project. This would bring out inconsistencies between employment and investment targets and provide guidance for corrective action.

The experts warn that, in determining how much investment is needed, the experience of the economically advanced countries must be used with great caution. Otherwise there is a danger of underestimating the capital requirements for employment creation. For conditions in today's developing nations differ in many respects from those prevailing when the older industrial countries began to develop. In

addition to a rapidly growing labour force, many of the developing countries have accumulated a large stock of idle labour. Mass emigration is no longer a practical alternative to employment creation at home. Furthermore, the most productive techniques today often require more initial investment and are less labour-absorbing than before. Conditions of world trade are also less favourable for newly developing countries. For these and other reasons rates of investment which were adequate to absorb the supplies of labour in various countries in the past may be wholly inadequate to meet present employment problems of the developing countries. The experts estimate that rates of investment of the order of 20 per cent or more of the national income may be essential for many of them if an adequate impact is to be made on unemployment and underemployment.

The first corollary of this finding is that a very large proportion of any increase in national output and income should be ploughed back into investment. This calls for higher rates of saving. If, however, the policy is to create as many new jobs as possible, the formerly unemployed and underemployed workers for whom new jobs are provided will earn more and will want to consume more than before. An increase in consumption by these workers is indeed a major aim as well as the result of the employment policy. But the rising demand for consumer goods by the newly employed makes it more difficult to raise the level of investment.

It is therefore necessary to limit the growth in consumers' demand on the part of other groups. An attempt to increase the rate of investment while simultaneously permitting an unrestrained growth in consumers' demand will either be self-defeating or result in inflation with its undesirable social consequences and its retarding effects on the pace of development.

One way in which the growth of consumers' demand may be limited is through increased voluntary savings. Another is through additional taxes. In many cases it will be necessary to restrict the consumption of upper income groups whose need for additional consumption is least pressing. Tariff policy and exchange and import controls may be used to restrict non-essential imports and high corporate and personal income taxes, high indirect taxes on non-essential goods and a general expenditure tax may be used to restrain spending on consumption in general.

Raising the Employment Effects of Investment

Apart from raising the level of investment, developing countries with much unemployment and underemployment should seek to create more jobs with such capital as they have to invest. As noted above, this

may be done by investing in projects to make goods whose production requires much labour and by using labour-intensive techniques of production. The experts warn, however, that such measures cannot solve, or perhaps even make a major contribution to solving, the large-scale employment problems. The main solution lies in stepping up the rate of investment.

Labour-Intensive Goods

The choice between more and less labour-intensive products is limited for various reasons. The main question is how much of such goods can be sold, at home or abroad. Developing countries need machines and equipment, whether imported or made at home. Some of these goods are apt to be highly capital-intensive. Further, some countries depend on capital-intensive primary products such as petroleum, minerals and some plantation crops. In such cases shifting to more labour-intensive exports is not possible. If the products essential to rapid economic growth are highly capital-intensive there can be a real conflict between employment objectives and economic growth.

But in some important fields possibilities of shifting from capital-intensive products to more labour-using products exist. For instance, while residential and government buildings in urban areas usually require a great deal of capital and other scarce resources (e.g. cement and steel), other types of construction can make greater use of manual labour and of materials that can be produced by labour from locally available resources. Furthermore, the completion of a construction project may, or may not, be a basis for new employment. The former is the case with irrigation works, factories and roads; housing projects, on the other hand, create little employment after their completion. Another possibility is to discourage capital-intensive investments required for the production of luxury goods unless they offer export prospects or incentives to domestic producers strong enough to offset their absorption of scarce materials and capital.

Policy Measures

Governments can encourage more labour-intensive types of investment in their own investment activities.

Monetary, fiscal and foreign trade policy, designed to encourage a general increase in investment, can be used at the same time to encourage private investors to choose more labour-intensive products and techniques. Lower interest rates or tariff rates, tax deductions and more rapid depreciation might be allowed for approved investments using desirable labour-intensive techniques; and employers might be permitted to add a certain amount per worker to their payrolls when calculating

production costs for tax purposes. Furthermore, the payment of part of labour income in the form of cash social benefits financed from general revenue would reduce the direct cost of labour to entrepreneurs.

The consumption of luxury goods made by capital-intensive methods could be discouraged by tax policies; some traditional labour-intensive industries could be protected by tax policies and assisted in improving their efficiency; and the possibilities of importing second-hand machinery might be explored as a means of saving scarce capital and foreign exchange.

The experts consider development of better labour-intensive techniques and capital-saving innovations to be of vital importance for both the employment and growth objectives; they urge that all possible measures be taken to promote inventions and discoveries in this field.

Raising Employment with Little or No Investment

There are considerable possibilities of raising employment, output and investment by the direct use of labour with a minimum draft on scarce equipment, materials and skills. Some equipment and materials are not scarce since they can themselves be produced by labour; some of the skills needed are already available or can be easily acquired.

Rural Areas

Much of the underemployed labour in the less developed countries is located in rural areas. Many types of labour-intensive activity may be promoted to absorb this labour and to increase output locally. These are broadly grouped as follows:

Local Capital Construction. Particular interest attached to irrigation and drainage works, land improvement (e.g. terracing) and the building of roads and storage facilities, as all these can contribute to a quick increase in agricultural output and income. Under certain conditions newly irrigated land may permit double or triple cropping, which can absorb labour. Simple construction projects may also be undertaken to improve social services and amenities of the village community, such as self-help rural housing, building of schools, rural health stations and so on.

More Labour-Intensive Methods of Cultivation. Higher yields per acre may be obtained by making specific farming operations more labour-intensive (e.g. heavy manuring, deeper ploughing, transplanting, closer planting, more weeding, more labour on seed-bed preparation and on harvesting). Where ample labour is available, every effort should be made to explore, develop and introduce measures for raising agricultural

yields which require more labour but little or no increase in the use of scarce resources.

Development of Rural Industries. An indiscriminate promotion of small village industries can be wasteful. There is, however, likely to be scope for developing certain rural industries, particularly those catering for the needs of agricultural and rural communities, when other rural activities expand. Many such industries can be established in neighbouring towns to take advantage of urban facilities.

Other Local Activities. A variety of traditional rural pursuits may be developed to raise employment and income of the rural population. High in priority are animal husbandry (which serves the dual purpose of increasing meat output and the supply of organic manures) and afforestation, which is in many cases also essential for preventing soil erosion. Fishery, poultry farming, bee-keeping, sericulture and traditional rural handicraft work may also be cited as examples.

Promotion of Social Services on a Self-Help Basis. There are ways of linking up the utilisation of underemployed labour with promotion of rural social services on a local basis. These services may include public sanitation, short-term training classes during slack seasons, use of the educated unemployed for teaching both children and adults, kindergartens and crèches to care for the children of working women.

Urban Areas

In urban areas there are also possibilities of absorbing the unemployed and underemployed in various activities needing relatively few scarce resources.

One such possibility is fuller utilisation of existing industrial capacity. Introduction of multiple shifts may provide more industrial employment quickly. To create economic conditions allowing full use of capacity may, however, call for various kinds of government measures. When the demand for industrial products is rising rapidly, opportunities will also arise for developing small labour-intensive industries complementary to the large-scale modern manufacturing industries.

Local authorities may find scope for employing unskilled unemployed and casual workers in public works, which, however, need to be coordinated with major investment projects. Some of them might be utilised in developing certain agricultural activities (animal husbandry and market gardening) in areas adjacent to towns.

There may be possibilities of absorbing unemployed among young educated people by expanding and improving the quality of social services in urban areas. For example many of them might be employed as

teachers in primary and secondary schools; others might be retrained as nurses and auxiliary workers in local health centres. Some of them might be trained to become government officers for the execution of rural development programmes.

Raising the Productivity of Existing Scarce Resources

There is great scope in most less developed economies for raising the productivity of existing scarce resources -- land and capital -- by relatively simple, known methods of productivity improvement which do not require much additional investment. For the achievement of this, much depends on the initiative of management. By applying these methods fully and effectively, considerable additional output of consumer, intermediate and capital goods could be obtained from both the traditional and the modern sector. This additional output can do much to raise the level of investment and consumption and to support more workers in productive employment.

The Traditional Sector

In agriculture many simple improvements in farming techniques and practices can be made with little or no use of scarce physical resources, and can be of crucial importance in yielding a quick and substantial increase in the productivity of land. Methods involving the use of more labour inputs were discussed earlier. Here mention may be made of seed selection, crop rotation, improvements in farm management, soil protection, development of local manures and insecticides, and of simple but more efficient implements and better work methods.

Output of handicraft and small-scale industries can be increased appreciably without much additional capital outlay by removing certain organisational defects. Measures needed to overcome these defects include the provision of adequate credit facilities at reasonable interest rates, improved arrangements for purchasing a steady flow of reasonably priced raw materials, improved marketing arrangements, and the merger of uneconomically small units or the establishment of co-operatives or other arrangements for common service facilities. The productivity of small manufacturing undertakings can also be raised through simple improvements in equipment and production techniques, without necessarily involving a greater use of motive power. It is, however, stressed that the traditional industries should adapt themselves to economic growth, and establish a complementary relationship with large-scale industries, for instance through subcontracting; and that if they are to survive, output per man-hour in these industries must be raised considerably by mechanisation.

The Modern Sector

Many methods are available for raising the output and productivity of the modern sector -- including, notably, construction, transport, communications and public administration as well as manufacturing -- with little additional outlay. In the main, these methods can be devised by application of principles and techniques of industrial engineering. Examples of such methods are: better maintenance and repairs, fewer machine stoppages, better regulation and sometimes speeding-up machines, proper organisation of the flow of work and materials, better training and supervision of workers, improvement of methods and conditions of work, application of incentives to increase output and reduce labour turnover, reduction of waste of materials and fuel. The extent to which these and other methods of productivity improvement will be applied in the large-scale modern enterprises depends, however, much on arousing interest in higher productivity and encouraging a flow of capital-saving innovations through education, publicity campaigns and training programmes.

The Need for a More Favourable Social Environment

In many less developed countries, the experts point out, the social environment can be made more favourable to higher productivity by agrarian reform, by reduction of the dominance of middlemen and money-lenders, by changes in the institution of family ownership, by the reduction of the social gulf between employers and manual workers and by the promotion of an interest in long-term growth rather than a quick turnover. Wages and price policy should ensure that workers share the benefits of higher productivity. Age-old fatalism must give way to a belief in and a desire for economic and social progress.

Labour Mobility, Regional Planning and Training

Unemployment and underemployment tend to be highly concentrated in certain regions and among certain groups of workers, notably the unskilled. A growing economy experiences structural change and needs a high degree of mobility of productive resources.

Regional Development Planning

Encouraging a movement of people away from poor regions where there is not enough work and settling them elsewhere is one way of dealing with the problem of lagging regions; another is to take special measures for the development of such regions. Greater regional dispersion of industry is important as a means of checking excessive urbanisation and thus of economising on private and public investment otherwise needed to alleviate congestion and expand facilities in existing overcrowded industrial centres.

Regional industrial planning will vary from country to country. It can be based on the development of mineral resources or on the processing of agricultural products. The experts, however, point out that regions in which industry is expected to make a major contribution to employment creation will need to establish at least some branches of manufacturing industry with a nation-wide market and with prospects of higher than average rates of growth.

Occupational Mobility -- Training and the Removal of Barriers

In the less developed countries the most important barrier to finding employment in more skilled jobs is the lack of educational and training facilities. It is stressed that education and training are fundamental fields of action in which long-term planning is particularly needed since each country must organise a long-enduring domestic effort covering all the stages of the educational and training system in terms of both facilities and staff. Much industrial training may be provided through the efforts of private enterprise.

For want of experience development programming hitherto has often failed to take adequately into account the manpower requirements and the investment needed in training and education. The experts underscore the importance of systematic assessment of the requirements for and costs of training technical and professional personnel. This training is costly and takes a long time and therefore needs to be planned in advance.

International Aspects

The less developed countries will have to rely mostly on their own efforts to solve their employment problems. But international measures in the field of trade, investment and technical assistance can be of vital importance in enabling them to overcome shortages of particular types of equipment and skill, and so to increase the number of employment opportunities that can be created.

International Trade Factors

In most less developed countries inadequacy and instability of export earnings are major factors reducing their capacity to maintain a high and stable level of investment and to create employment opportunities. The exports of developing countries were hampered during the 1950s by a worsening of their terms of trade, and in some cases by the inflationary effects of development policies and by taxation of exports to finance development.

Exports earnings can be made less unstable by the maintenance of economic stability in the developed countries, by international commodity agreements, and by individual and collective action by the developing countries supported by short-term financial assistance from international institutions. For example compensatory financial assistance from international agencies might be provided to offset the retarding effect of sharp falls in export earnings on the implementation of development programmes.

Capital Imports

Capital imports help to create employment opportunities by raising the level of investment that can be achieved. Developing countries need more foreign capital, and also technical assistance to help them to make good use of it. All existing channels of international capital, and some new ones, should be intensively exploited. In allocating new loans and grants, special consideration might be given to the need for financing programmes and projects which help particularly to promote employment objectives, and to countries that face specially difficult employment problems or are making special efforts to overcome them.

Foreign investment in less developed countries has so far concentrated mostly on extractive industries and on petroleum, although in some countries it is contributing much to developing subsidiary industries for manufacturing and processing raw materials for which there is a high demand. Activities of foreign firms in this field will considerably assist in the enlargement of employment opportunities in these regions. It is, in particular, desirable that foreign investors should be encouraged to employ and to train local staff including managerial personnel, to subcontract some processes to local producers, and to develop joint ventures with local entrepreneurs.

In view of the importance of the supply of consumers' goods, particularly food, to employment programmes, the experts consider that, under proper safeguards, an international effort to make surplus food products available to countries undertaking such programmes would be of the greatest value. They further suggest that surplus disposal programmes could well be extended beyond foods. Industrial countries often have excess capacity in their capital goods industries, especially in periods of recession. There is scope here for a comparable "surplus equipment programme"; as a counter-cyclical policy industrial countries might produce and store certain standard types of equipment (e.g. trucks, drills, railway rolling stock, and possibly special types of labour-intensive equipment), for purchase as required by developing countries.

IMPROVEMENT OF PUBLIC ADMINISTRATION
IN UNDERDEVELOPED COUNTRIES

[From A Handbook of Public Administration: Current Concepts and Practice with Special Reference to Developing Countries, United Nations Technical Assistance Programme, United Nations Department of Economic and Social Affairs, New York, 1961, pp. 123-126.]

[Recognizing that administrative improvement is an essential element in development progress, the UN Department of Economic and Social Affairs requested Dr. Herbert Emmerich, the well-known authority in public administration, to prepare a concise and practical handbook of current concepts and practices in the field with special reference to the problems of underdeveloped countries. Produced with the assistance of UN staff experts, the Handbook covers the importance of improved administration for national development; organization structure and analysis; operational methods and equipment; personnel administration, including career services, human relations, supervision and training; problems of decision-making, decentralization, institutional autonomy, and efficient management of public enterprises; the budget and financial administration; research and planning; and public relations and reporting. A concluding section describes the technical assistance and training available to underdeveloped countries, and ways of utilizing the services of outside experts and consultants in public administration.

Dr. Emmerich makes some pertinent observations on how an underdeveloped country should organize itself to prepare and implement a program of national administrative improvement. His main suggestions are presented in the following excerpts from the Handbook.]

Experience has shown that when a country embarks on a programme of national administrative reform, certain preparatory measures are essential to ensure the success of the undertaking. For over-all and government-wide programmes especially, certain steps of national preparedness and mobilization of available resources are indispensable. Many countries, even when advised by capable external experts, have failed to secure important administrative improvement because of failure to prepare in advance on the scale and for the period required to implement the recommendations.

The Government may decide that a comprehensive type of attack in the form of an overall programme of administrative reform is needed. In such a case, before requesting technical assistance, a preliminary survey by a senior consultant can be of great value. It may appear that the Government does not have the necessary institutional apparatus to provide the national impetus and counterpart assistance to receive a team of administrative experts. The Government may wish advice on the kinds of temporary and permanent organizations that other Governments have created to assist in the work, and also on the types of international experts required to advise the national officials.

Administrative reform which is government-wide in its application is closely related to the constitutional, statutory and political institutions of the country. When changes are to be studied and proposed in the organization and functions of ministries, in the manner of appointing personnel, and in administrative and financial methods and controls, they have a deep significance for the power structure of ministries and departments. Major reforms therefore require not only the initial assent of the Government but also continuing and careful attention at the highest political levels. One good way of ensuring this continuing interest and attention at high levels is by the creation of a committee of ministers or of very senior officials reporting directly to the president, prime minister, or cabinet, as the work progresses, to advise and support the expert's work programme, to review the changes proposed from a policy point of view, and to formulate recommendations for action.

Another aspect of fundamental programmes of administrative reform is that they are of a long term and have a significance beyond the term of office of a particular government. The impartiality of the recommendations must, therefore, be assured, so that regardless of the political complexion of the government they will be considered fair and have the best chance of becoming permanent. Some countries have in the first years of such a programme found it helpful to appoint a temporary commission on public administration reform, consisting of high officials of the Government, prominent citizens from various sectors of the economy and of varying political viewpoints to inspire general respect and confidence in the objectivity of the proposals.

The actual work of conducting surveys and formulating proposals by such a national commission on public administration will require the services of a competent technical staff. The assembling of the staff can itself be a demonstration of modern methods of recruitment on a merit basis, as well as of the training of able officials who will be gradually inducted into permanent posts as they grow in experience and maturity. Such a staff, under the direction of a competent national director, will provide the additional counterparts needed if a team of international experts is to be invited to assist in the project.

At an early stage in its work, the central staff or secretariat of an administrative reform commission should begin establishing outposts and lines of communication within each ministry, department and agency. Each minister should be asked to designate a liaison officer to maintain relations with the commission during the survey period. The greatest possible participation by these representatives of the ministries and departments should be encouraged. This process of participation of many departments will have a number of good results: it will diffuse a spirit of analysis and self-criticism in regard to existing administrative organization and procedures throughout the Government; it will give each agency a role of participation in an important enterprise; and it will bring the experience of all departments to bear on the result and thus facilitate the subsequent steps of adoption and installation of new procedures. Furthermore, participation at the ministerial and departmental levels will in itself be a valuable training in public administration and will prepare men and women in the departments for later responsibilities in administering the new methods.

One of the tasks of the temporary commission will be the setting up of permanent national institutions to take over its work on a long-term basis. In many countries, reform commissions have succeeded in establishing a general institute of public administration to act in a training and research capacity, a central office of personnel administration, or a central office for organization and methods work.

A word should be said about the advantage of the over-all approach in administrative reform. Many changes and improvements in methods and procedures can be made in any given ministry, and it is not intended either to disparage them or to assert that they are not to be encouraged. But if functions and duties of the administrative organization which cut across the entire structure of the Government are to be reorganized, it is obvious that the government-wide viewpoint must be taken and that specialized or isolated consideration will be incomplete. If improved standards of personnel administration are to be adopted and if better conditions of recruitment, pay and terms are proposed, it is usually impracticable to accord these benefits to a single ministry and not to treat the problems of career administration as a government-wide problem. The government-wide approach also has

advantages in the following services: central purchasing, control of government buildings; general training programmes and budget and accounting systems. In these difficult areas time and money and skilled personnel are employed to the greatest advantage for the greatest number if efforts can be pooled and a concerted attack can be made on these universal problems on a government-wide basis.

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The Use of Organization and Methods Programmes in Public Administration, United Nations Technical Assistance Programme; United Nations Department of Economic and Social Affairs, New York, 1961, 44 pp.

In addition to the Handbook, the UN Department of Economic and Social Affairs has also recently published a description of one of the main techniques used in administrative improvement -- Organization and Methods (O and M) -- for application in underdeveloped countries. The report explains the nature and varied uses of the "O and M" technique, and analyzes the experience with it of many UN and other technical assistance projects in underdeveloped countries. The report contains a brief bibliography on "O and M" work.

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Modernizing Government Revenue Administration: The Application of Technical Cooperation in Improving Revenue Administration in the Governments of Developing Countries. Prepared by the Public Administration Service for the Public Administration Division of the International Cooperation Administration, Washington, D. C., 1961, viii and 92 pp.

This book is designed to provide some practical guidelines for improving the administration of the revenue aspect of governmental budgetary planning and operations in underdeveloped countries. Pointing out that much more attention has been paid in recent years to the planning, administering and controlling of expenditures, the book seeks to remedy the neglect of the revenue side by explaining in simple terms the relationship between the national economy and the revenue structure; the nature of revenue budgeting; the major revenue sources; the administration of revenue programs; and the availability of technical assistance for improving revenue administration in underdeveloped countries.

The book was prepared for the U. S. International Cooperation Administration (now the Agency for International Development) by the Public Administration Service of Chicago, Illinois. The principal author was Dr. Wendell G. Shaeffer, then a member of the staff of the Public Administration Service, and now Assistant Dean of the Graduate School of Public and International Affairs, University of Pittsburgh. Copies of this publication may be obtained from the Communications Resources Division, Agency for International Development, U. S. Department of State, Washington 25, D. C.

CURRENT TRENDS IN SCIENTIFIC RESEARCH

Pierre Auger

[United Nations and United Nations Educational,
Scientific and Cultural Organization, New York
and Paris, 1961, 245 pp.]

Though not specifically concerned with scientific research for underdeveloped countries, this survey would nonetheless be a most useful reference book for government officials and others who are seeking to adopt or adapt the latest advances in science and technology to the needs of their countries. It was prepared for the United Nations and the United Nations Educational, Scientific and Cultural Organization by Professor Pierre Auger, formerly Director of UNESCO's Department of Natural Sciences, after extensive study and interviews or correspondence with over 200 scientific organizations and nearly 300 individual scientists in all parts of the world. (These organizations and individuals are listed in annexes.)

The survey covers the theoretical and applied aspects of the fundamental sciences (mathematics, physics, chemistry, biology), the earth and space sciences, the medical sciences, the food and agricultural sciences, fuel and power research, and industrial research, as well as the organization of scientific research, both governmental and professional. For each, Auger surveys the latest advances and experimental techniques, and outlines the general directions in which theoretical research and applied development are tending.

In a concluding section containing recommendations based on his survey, Auger points out the need for a new international organization specifically charged with the responsibility for helping underdeveloped countries to benefit from the results of technology, applied research and industrial development:

"The benefits of all the new and significant results achieved by scientific research can be made available to mankind as a whole only through their technical application. In certain regions, for example, the level of living can be raised and industrialization can be brought about only by strenuous and sustained technical effort. This effort must be based on the technical knowledge accumulated over the decades, adapted as necessary to meet the distinctive local problems. This process of applying scientific and technical knowledge in order to produce specific effects on methods of work and daily life represents the greatest need of countries in course of development.

"The task of encouraging and assisting in this process has a number of aspects: that of developing scientific and technical teaching in schools; that of higher scientific and technical education at universities; and that of research at university, public and industrial laboratories. All these are prerequisites for converting knowledge gleaned from foreign experts and from publications into a source of continuous progress at the local level. Furthermore, large-scale investment is vital to the full utilization of natural resources and agricultural output.

"The task of making the transition from scientific research to industrial technology should be treated as a collective responsibility, if the most under-privileged regions are to be enabled to solve their industrialization problems. This responsibility affects the responsibilities of existing international agencies, and sets them many problems of organization and finance which call for urgent study.

"There is at present no agency in the United Nations family concentrating on the international aspects of technology, applied research and industrial developments, as distinct from technical assistance in the strict sense of the term. It may be thought that this deficiency is becoming more acute as technology advances, and that specialized organizations set up in this field could not deal with all the problems arising: apart from agriculture, medicine, nuclear science, air transport, telecommunications and meteorology, the subjects to be dealt with include the vast fields covered by the chemical industry; mechanical and electrical engineering; rail, road and water transport; the extractive industries (fuel and metals); building materials; and lastly, optical, electrical and mechanical measuring apparatus and instruments.

"The problem might be solved by establishing either an appropriate service within the United Nations family itself, or a new organization which would concentrate on the technological questions involved in the integrated development of economic and geographical regions.

"The smooth and rapid progress of scientific research largely depends on the available number of research workers, engineers and

technicians. In every country, therefore, efforts should be made to improve and develop education in general and scientific and technical education in particular.

"Countries sometimes have difficulty in establishing the necessary educational and training institutions on an adequate footing with their own unaided resources, especially in the case of highly specialized disciplines, such as the mathematical sciences, or of subjects which require expensive equipment, such as geophysics or the physics of high-energy particles.

"Recent developments indicate that a possible solution might be to establish regional institutes, which would be operated jointly by several countries in a given area and which would also draw upon the services of specialists and teachers from other parts of the world. Such institutes of higher education and higher scientific and technical training would provide a means, firstly, of training the research personnel and teaching staff of the member countries and, secondly, of giving further training to the existing research and teaching staff at short courses designed to put them in touch with new techniques essential to their work."

NEW BOOKS ON ECONOMIC
AND SOCIAL DEVELOPMENT

Asher, Robert E., and others, Development of the Emerging Countries: An Agenda for Research; Washington, D. C., The Brookings Institution, 1962, xi and 239 pp.

This book is a timely and valuable summary of the insights so far gained into the complex processes of development and of the further work which needs to be done to improve both theoretical understanding and action programs. It results from a two-day conference in May 1961 held by The Brookings Institution in Washington, D. C. The purpose of the conference was to explore ways in which research in the social sciences could improve the foreign aid activities of the U. S. Government. This book contains a number of papers written for the conference by specialists in various fields of development.

An introductory essay by Everett E. Hagen of the Massachusetts Institute of Technology outlines the inter-relatedness of social, cultural, and economic change in underdeveloped countries and indicates the main areas in which socio-economic research is needed; and, in a supplementary paper, Albert O. Hirschman of Columbia University also comments on these subjects. Gerhard Colm and Theodore Geiger of the National Planning Association analyze the methods of development planning and programming and the further investigations which are required to improve techniques in this field. Arthur T. Mosher of the Council on Economic and Cultural Affairs has written a comprehensive survey of research completed, under way, and needed for accelerating agricultural development. The problems of adopting and adapting Western technologies for use in underdeveloped countries are discussed by R. S. Eckaus of Brandeis University; while Mary Jean Bowman and C. Arnold Anderson of the University of Chicago analyze the role of education in development. The interrelations of foreign aid and political evolution in underdeveloped

countries are discussed by Howard Wriggins of the Legislative Reference Service, Library of Congress. In a concluding essay, Robert E. Asher of The Brookings Institution summarizes the results of the conference and recommends a broad program of research for improving U. S. aid to underdeveloped countries. In addition to his substantive contribution to the book, Robert E. Asher had primary responsibility for organizing the conference and for editing the essays for publication.

This book would be of interest to the people of underdeveloped countries not simply for the suggestions made about research needs, but more importantly because each essay summarizes the current state of knowledge about the aspect of economic and social development with which it deals.

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Galbraith, John Kenneth, Economic Development in Perspective; Cambridge, Mass., Harvard University Press, 1962, vi and 76 pp.

When an economist as sophisticated and articulate as J. K. Galbraith sets out to present the essentials of a complex subject in simplified form, the result makes worthwhile reading not only for the lay readers to which it may be addressed but also to the experts. Now United States Ambassador to India, Dr. Galbraith delivered five lectures on economic development at five major educational institutions in India. The lectures deal with contemporary efforts at economic development in the light of historical perspectives; the relations between the developed and the developing nations; the theory of development planning; the role of education in economic development; and elements common to both private and public corporations as the major organizational form of modern production.

There may not be general agreement on all of Dr. Galbraith's conceptions of the fundamentals of economic development. Nonetheless, this little book is bound to stimulate reappraisals of some ideas about development that have become commonplace in recent years. This is particularly true of the points made in the last lecture dealing with the corporate form of productive enterprise. Dr. Galbraith explains that the requirements for success of a corporate enterprise are very much the same regardless of whether it is owned by private shareholders or the government. [For Dr. Galbraith's views on other aspects of this subject, see "Guidelines for Public Enterprises," by John Kenneth Galbraith, pages 75-79.]

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Braibanti, Ralph, and Joseph J. Spengler, eds., Tradition, Values, and Socio-Economic Development; Duke University Commonwealth-Studies Center, Durham, N. C., Duke University Press, 1961, viii and 305 pp.

During the decade of the 1950s, the necessary part played by non-economic factors in development has more and more come to be recognized not only by social scientists but also by government officials and technicians working in this field. The notion that development consisted of nothing more than increasing the rate of capital formation has long since been abandoned even by the economists who first propounded it. However, though the importance of sociological, psychological, and political factors has now been generally accepted, not much is known as yet about the precise ways in which they operate or about how they might be influenced in order to accelerate the process of social change and economic growth.

In this book, a group of social scientists have combined to define in greater detail than heretofore the roles of some of these factors and to explain the relevance of their findings for development policies. They are concerned particularly with the ways in which the traditional attitudes and values of people in the underdeveloped countries usually impede -- but in some cases also stimulate -- the socio-economic changes necessary for accelerated economic growth. Drawing primarily upon sociology, anthropology, and political science, their analyses explain the relevance of concepts and relations in these subject disciplines to economic development per se.

According to the editors' introduction, "Each of the essays is an independent contribution presenting points of view not necessarily in agreement with the others. All are based on the common effort to understand the process of socio-economic development using the apparatus of particular social science disciplines and experience in various cultural contexts. The range of experience from which the authors can draw their empirical data is extensive and includes study or teaching in India, Pakistan, the Union of South Africa, Israel, Singapore, Japan, Cuba, Malaya, Vietnam, Taiwan, Thailand, Okinawa, Canada. Joseph J. Spengler, James B. Duke Professor of Economics at Duke University and Director of Graduate Studies in Economics, distinguishing among theory, ideology, and non-economic values, suggests that the rate and direction of development depend on the emotional and intellectual predispositions of the elites and the masses. Ralph Braibanti, Professor of Political Science at Duke University and on leave for 1960-1962 as Professor and Chief Advisor, Civil Service Academy of Pakistan surveys the role of political science in analyzing underdeveloped areas and explores six questions to which subsequent political science research may be directed. Wilbert E. Moore, Professor of Sociology and Faculty Associate of the Center of International Studies at Princeton University, explores types of relationships among relevant variables

found in the social framework of economic development. Bert Hoselitz, Professor of Social Sciences and Director of the Research Center in Economic Development and Cultural Change at the University of Chicago, analyzes the components of tradition, suggests four forms of tradition-oriented behavior, and argues that tradition is not always adverse to economic development. Melville J. Herskovits, Professor of Anthropology and Director of the Program of African Studies at Northwestern University, surveys the role of anthropology in determining the weight of cultural influences in enhancing or deterring social innovation.

"The remaining four essays are somewhat more empirically oriented in the respect that they deal with development problems in particular cultural contexts. In two related essays, I. H. Qureshi, Director of the Institute of Islamic Culture of Pakistan, traces the development of Islamic political thought which provides a background to understanding ideological forces at work in modern Pakistan. John D. Montgomery, Resident Director, International Cooperation Administration Personnel Training for Africa, African Research and Studies Program, Boston University, analyzes the impact of technical assistance on the internal policies of Taiwan, Vietnam, Burma, and Thailand. A pragmatic account of social change in French Canada is given by Mason Wade, Associate Professor of History and Director of the Canadian Studies Program at the University of Rochester."

This is not a practical "how to do it" book, but it will nonetheless be of use to those concerned with planning and administering development programs. By broadening their understanding of the complexity of the process of development, this book can help them to cope more effectively with the factors involved in specific situation.



